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Manufacturers' Record.

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THOMAS P. GRASTY, Vice-President.

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COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

A VICTIM OF DELIBERATE HYSTERICS.

In some extended comments upon the child-labor agitation in the South the Manufacturers' Record alluded on August 28 to "editorials in several Southern journals 'recalling' from the columns of the day-before-yesterday exchange some verses rather inapplicable to Southern conditions written about sixty years ago by Miss Lizzie Barrett." The Biblical Recorder of Raleigh, N. C., evidently did not read the Manufacturers' Record of August 28, for in an issue of early September it did the very thing we had criticised, and "recalled" the little verses. Whereupon a marked copy of the 28th of August was sent to the editor of the Biblical Recorder.

The thing went home. In its issue of September 24 the Biblical Recorder publishes an editorial nearly a column and two-thirds long full of some of the most remarkable allusions it has ever been our fortune to read. Here is one, for example:

The Manufacturers' Record is a first-rate paper; but it is not the whole field. Its editor has brains, but not all. His paper has succeeded, and deserves success; but swell-head will ruin it just as quickly as it will ruin anything else. It has no right to deal in contempt, no right to patronize, no right to look down upon other Southern papers. They may not make so much money; but they are quite as much to be respected.

Words, words, words. But what have they and what has the relative money-making ability of the Manufacturers' Record and other Southern papers to do with the case? There is as much mystery about that paragraph as about the allusions by the Biblical Recorder to the "successful self-made-half-made," and to lack of "reverence" in alluding to the author of the "Cry of the Children" as Miss Lizzie Barrett. These things, with remarks upon what the Biblical Recorder calls "the main question," that is to say, legislation

against child labor, which the Manufacturers' Record has barely grazed, are features of an explosion, ebullition or eruption, call it what you may, that may be explained only upon one theory. The Biblical Recorder says that "it is time people had hysterics." With refreshing and characteristic consistency the Biblical Recorder, which also believes that "it is time that ordinary language were exhausted," seems to have put its preaching into practice, to have done its level best to introduce extraordinary language to the public and to have indulged in a fine fit of hysterics. But hysterics does not permit folks to think right. It even prevents the Biblical Recorder from reading straight, as is proved by its reference to "day-before yesterday journals." That's the way it tries to quote from the Manufacturers' Record. And the thing was in clear, plain, bold-face type, in good ink and upon rather fine paper. No one supposes for a moment that in normal frame of mind the Biblical Recorder cannot read intelligently. Hysterics, though, disturbs the intellect and makes one think and do many foolish things. It is hardly proper for sober questions to be put to anyone suffering from hysterics, but the Manufacturers' Record must ask the Biblical Recorder two questions:

From what exchange of day before yesterday, or, indeed, of week before last, did the Biblical Recorder clip its material recalling the little verses?

Did or did not Miss Lizzie Barrett write the "Cry of the Children?"

THE CONGESTION OF RAILROAD TRAFFIC.

Several years ago, when the revival of business activity set in after the final defeat of the free-silver craze, railroad managers were not far-seeing enough to be able to form any conception of the extent and length of continuance of the heavy traffic suddenly thrown upon them. Anticipating that it would lessen in a year or two, they undertook to handle it without making adequate provision for an increase in motive power. As the volume of traffic steadily increased engines were overworked, and repairs could not be kept up because the pressure was too great to permit engines to go to the shops to be overhauled. The result has been that, broadly speaking, the whole motive power of American railroads has been overstrained, and every day intensifies the trouble. The total capacity of all the locomotive shops in the country, outside of the few built by railroads, is about ten engines a day, whereas one leading system has so overtaxed its engines that it is said to be taking out of service for repairs about three engines a day. Taking the whole railroad system of the country into account, and the increase of new locomotives is probably just now not much more than equal to the number that are forced by complete breakdowns back to the shops, though the increase in size and power of the new engines is a

factor of considerable importance. In the meantime traffic is increasing beyond the ability of anyone to fully comprehend. One day last week the superintendent of one railroad system reported over 10,000 loaded cars on his tracks without a locomotive to handle them, and another road reported on one line fifty-two loaded trains waiting without an engine for them.

In 1900 we made 13,700,000 tons of pig-iron; this year our production will be about 17,000,000 tons, unless largely curtailed by a breakdown of transportation, and we are importing at the rate of about 1,000,000 tons, and yet there is an iron famine. The increase from 13,700,000 tons in 1900 to about 17,000,000 tons this year will mean in the handling of coke, ore and limestone, in addition to the iron, an increase of not far from 20,000,000 tons of freight. Our grain crops this year promise to exceed by about 1,000,000,000 bushels the crop of last year, equal, in round figures, to about 30,000,000 tons. Thus, without counting the traffic which necessarily is developed by reason of this increase in iron and grain, here are two items which by themselves mean an increase of freight of, say, 50,000,000 tons. As late as 1896 our total production of pig-iron was 8,600,000, and allowing, say, six tons of freight for each ton of iron made, the total traffic in hauling ore and coke and limestone to the furnaces and hauling iron away in 1896 was about 51,000,000 tons, or about the same as the increase in iron over 1900 and of grain freights this year over last.

These figures are given simply to approximate the development of traffic. All of the grain increase will not be hauled out of the country in which it is produced, but the direct and indirect traffic developed by the increase in grain and iron will far exceed 50,000,000 tons. That means an enormous increase in machinery freights and in general traffic, both freight and passenger. Even now, before the grain and cotton crops have commenced to move freely, furnaces are being constantly banked because of failure to receive coke and ore, and pig-iron and steel-rail shipments are seriously delayed to the great detriment of consumers. When the cotton and grain and anthracite coal begin to move on a large scale the situation will become still more acute. What is to be the outcome? The wisest railroad managers cannot answer. They only know that motive power is being badly overtaxed; that an increase in power equal to pressing needs seems to be impossible, for new engines cannot be produced rapidly enough to take the place of those wearing out and of those which already need rebuilding, taking into account the steady expansion of traffic. These facts prove that we have not been equal to fully measuring our country's advancement;

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 72 and 73.

that our growth is more rapid than our increase in facilities for handling it, and that, instead of being discouraged by the fear of dull times in the future, the business interests of this country ought at once to plan for far broader and more comprehensive development of railroad terminals and motive power, and for that still greater expansion which shall come in the near future, even if we do have to slacken pace for a year or two to catch breath for a fresh start.

AMERICAN COTTON PROBLEMS.

At the meeting this week in New York city of the New England Cotton Manufacturers' Association the majority of the papers were of a technical character of special interest to men actively connected with the management of the textile industry or to manufacturers of cotton-mill equipment. Three or four, however, appealed to a wider public. Mr. S. N. D. North, chief statistician of the division of manufactures of the census, said that no commodity is followed as closely at every step in its progress from the seed-planting to the mill-door as the American cotton crop, and his paper on the world's supply and consumption of cotton was directed primarily to a denial of the contention in European quarters that the American crop is becoming the subject of organized speculative movements in the United States, and to a discussion of the dissatisfaction in English mill centers with the conditions surrounding the cotton supply and of efforts made spasmodically to give English spinners independence of the American cotton fields. To counteract impressions about manipulation of the market, Mr. North explained the method followed by the census office in making an annual canvass of the cotton crop through the ginners, and for the benefit of growers, said:

The American cotton-grower may very well claim that he cannot be expected to sell his crop at a figure which will permit the worn-out cotton mills of England to continue to earn a profit on the original investment. * * * Whether or not cotton can be grown at a fair profit at a price less than that now prevailing I do not know, but it seems doubtful if this can be done east of the Mississippi river or in sections of the South where there must be a large expenditure for fertilizers in order to secure a remunerative yield per acre. The probability of a successful cotton harvester is increasing. This present season marks the first regular contract ever made in the world to pick cotton. Should such a machine prove successful, it would revolutionize the cotton-growing industry and materially reduce the price of the staple. * * * The most important thing for England today is that the South shall continue to increase her cotton acreage in the future in about the ratio that she has increased it in the past thirty years. On the other hand, it is equally important to the South that she shall retain in the future the supremacy as the world's cotton producer, which now belongs to her. This she can only do by continuing to regularly increase her acreage cotton crop at the rate of about 300,000 bales per year.

Bearing upon the plight of old English mills were the suggestions of Mr. Arnold B. Sanford of Boston. His topic was the expansion of cotton manufacturing. He urged the necessity of tex-

file training and of a readiness to adopt inventions and improvements making better work and more of it at a cheaper cost. He said that the day of small things is passing with the growth of the competition driving men to produce goods at the lowest possible figures, and, referring to mill building, he said:

Too many mills making the same kind of goods have been built; especially is this true of the Southern States. When a cotton mill is to be built, the projectors thereof should consider most seriously what kind a mill to build, and if the trade conditions fully warranted construction, and if its production will command a ready sale at fair margins of profit. * * * The danger has been in the South of too much competition among themselves, and rather too rapid expansion along the same line. No one for a moment can take the position that cotton-mill expansion in the United States has reached its zenith. What we want to do for our success in the future is to expand along the right lines and build our mills on the legitimate demands of the increase from the trade. Our natural advantages cannot be surpassed for climate and growing our own cotton.

Mr. Sanford dwelt also upon proper trade treaties and proper transportation facilities in extending markets for cotton goods. Complementary to that was the paper by Mr. O. P. Austin, chief of the Bureau of Statistics of the national Treasury Department, on foreign commerce in cotton goods. His interesting figures, covering movements in several years, were followed by the statement:

Five great factors enter into the production of cotton manufactures—raw material, power, machinery, capital and labor. What country produces the most and best cotton in the world? The United States. What country produces the most and cheapest coal for production of power? The United States. What country has the best and most ingenious and effective machinery of the world? The United States. What country has now the most capital available for use in manufacturing? The United States. What country has the most skillful, faithful and energetic workmen of the world? The United States. What country should, then, become the chief seat of the cotton-manufacturing industry, not alone for its own people, but for supplying the manufactured article to all the world? With full confidence in the productive ability of our agriculturists, the ingenuity of our inventors, the faithfulness and application of our workmen and the integrity and energy of our manufacturers and business men, I again answer, the United States.

Though there is a degree of wisdom in the suggestions of Mr. Sanford, the impression has been sedulously cultivated in recent years that the mill competition in the South has been a competition with New England mills, and a competition resting upon certain advantages possessed by the South which could not be duplicated by New England. These advantages need not be lost, even though mistakes have been made in planning mills for undesirable localities or in building ahead of the demand. And as to them are being added the advantages which Mr. Austin believes give the United States pre-eminence in the textile industry, the day may be expected when, without impairment to the health in older centers, the superiority of the United States in cotton manufacturing shall rest upon the full realization of the textile opportunities of the South.

In an address last Monday at Peoria before the bankers of Illinois Mr. Chas. J. Haden of Atlanta, giving due recognition to accomplishments by the West, made a strong plea in behalf of the South, and advanced practical arguments proving the opportunities there for capital and homeseekers. He spoke of the South's advantages as a cotton manufacturer, notwithstanding rapid development of the industry during the past few years; he said that 50,000,000 acres of grazing lands were lying idle

in the South; he mentioned the gold hills of Georgia and the farms and gardens in the different States, and predicted that in time of stress the South would be found to be a great reservoir of American conservatism. Throughout the speech was in happy tone, and the facts brought out in it should attract widespread attention.

SOLVING LABOR AGITATION BY A MILL MERGER.

In an interview in New York in August Mr. John H. Wooding, described as a prominent politician of South Carolina, said:

This child-labor question and the trust question are inseparably linked in the South. It was not until the advent of the combination that children were engaged for this work.

Without stopping to comment upon the manifest inaccuracy of the information which led Mr. Wooding to assert that children were not engaged in Southern cotton mills before the advent of combinations, it may be suggested that his linking of the child-labor question and the trust question is not entirely without foundation as far as the Southern cotton mills are concerned, though not in the sense of Mr. Wooding's remarks; for it is possible that the success of projects to consolidate into one corporation the Southern cotton mills may, if it is achieved, be largely due to the agitation against the employment of children in the mills. Plans for a merger of the mill properties, which Mr. Wooding would probably call a trust, have been under consideration for several months. There has been decided opposition to the plans, especially the one originating in New York city, because of its financial proposition and because it seemed to squint toward an elimination of Southern interests from control of the mills. Now it is announced that a second plan originating in the South, and looking to the control of the merging corporation by representative millmen of the South, is to be carried out. If the report be true, it is quite probable that the decline of opposition to any such plan is traceable in part to a determination on the part of Southern mill managements to relieve themselves of certain responsibilities involved in giving steady employment and in contributing directly and indirectly to the health, happiness and physical, mental and moral improvement of thousands of operatives and their children. The kindly relations between Southern employers and employees in the textile industry dating back to the early days, more than half a century ago, of Graniteville and other pioneer mills, has been a notable feature of the history of American manufacturing. Yet during the past two or three years the Southern manufacturers have been subjected to a virulent and vicious agitation with their labor as a pivot, sufficient, in view of their record in the industry, to lead any but these Southerners to seize the first opportunity to retire from business and to put their capital into undertakings not yet assailable by the walking delegate. However justifiable such action might be, the merger dominated by outsiders did not appeal to the mass of the millmen. It did not promise a continuance of the kindly personal interest for employees which has prevailed in the South. But a merger under control of Southerners is quite another thing; for such a corporation controlling a majority of the mills could induce interstate action over a wide territory which would remove children under a certain age from the mills without inducing

greater evils for them and without embarrassing the industry and a great mass of its employees. In that way the child-labor question and the trust question would be linked, but not in a way to furnish material for politicians, walking delegates or other agitators.

SHIPPING LAKE SUPERIOR ORE TO VIRGINIA.

The demand for iron, and thus the demand for ore, has grown so much more rapidly than mines can be developed to supply ore that large shipments of Lake Superior ore have for some time been made to Virginia furnaces, coming via the Norfolk & Western Railroad. Now a dispatch from Roanoke says:

Representatives of the owners of the West End iron furnace, this city, today closed a contract with the Norfolk & Western Railroad to haul 50,000 tons of Lake iron ore to this city from Michigan. It is understood that the Virginia Iron, Coal & Coke Co. is negotiating for a large amount of this ore to use in their furnaces in this vicinity. The Michigan ore will be mixed with the Virginia ore in the manufacture of pig-iron.

Some Virginia furnaces have been figuring on importing foreign ore via Norfolk. This might possibly be profitably done, just as Lake Superior ore is now being used in Virginia by reason of the unprecedented activity in iron, but is could hardly be profitably handled in normal times.

IRON-STEEL-COKE.

Great Activity in the Birmingham District, and Many New Enterprises.

[Special Cor. Manufacturers' Record.] Birmingham, Ala., September 29.

The coal miners are threatening trouble, and every business interest in the district is on the anxious seat. The miners have been assessed by the State organization \$1 each per week for the strikers in the anthracite field. This has resulted in the collection in the State of between \$30,000 and \$45,000 a month for those out in the North. The collections are made through the offices of the companies. Several employees of the Tennessee Coal, Iron & Railroad Co. refused to pay the assessment. The company took the matter as purely voluntary, and refused to take it out of the time of those objecting. The miners contend that the company is bound to do so, and, failing to force the company to collect from all, 700 quit work. The miners' officers contend that the contracts with the companies stipulate that assessments made are to be collected by the companies. The company officials assert that the assessments they are obliged to collect are no more than those for the expenses of keeping up the organization, and that if the charge is beyond that, they are under no obligations to collect it.

It is not generally believed that an extended rupture will result, for if it does a large amount will be cut off from the anthracite men; for, of course, if the Alabama miners go out the money for the anthracite men cannot be secured, and the miners thus made idle will have to receive support. While the mines of the Sloss-Sheffield Steel & Iron Co. are not yet affected, they may be by the time this letter is in print.

This trouble as it now stands is very likely to further complicate the already serious situation in coal and coke. Both are scarce, especially the latter, and the shortness of equipment of the railroads is adding to the difficulty. The local concerns have no coke to sell, and several of them are crying for more than they need. An experienced coal man gives the following ideas on the coke shortage: "The strike in both the anthracite and the West Virginia fields has operated to the disad-

vantage of Alabama. We have been getting large lots of coke every year from Virginia, but their own troubles have made the supply short, and what was left was gobbled up by the users in the North at most any price." Careful business men are looking to next year, and not a few are anxious about where they will get their fuel for 1903.

There has been an offer made of English iron to help tide over the demand panic of at least one local concern. From what can be learned the idea was to put in this iron to help fill orders now old and made at low prices. It is not certain the offer will be accepted, because it is understood the English product is high in phosphorus, making it undesirable for the trade in question. The same conditions—very strong—prevail in the local iron markets. Some of the smaller plants are able to take orders for sixty days' delivery, receiving therefor big prices, while here and there may be found small lots at the big furnaces, though the latter seem to grow less as the days go by. Sales are made at \$19 for delivery after March, 1903, and at \$20 for delivery before that time.

There is as yet nothing definite concerning the intention of the Alabama Steel & Wire Co. and new plants it proposes to erect. It is known that local machine shops have contracts for boilers and stores for the company, and this is taken to mean that the building of furnaces—and a steel mill possibly—is a certainty, but the details are not to be obtained. Mr. Schuler told a local newspaper man last week that he would say nothing for fifteen days yet. The contract has been let for 300 coke ovens at the new town, Virginia, being built by the steel and wire company near Bessemer, and the work on them will be pushed as rapidly as possible. The two miles of track are almost completed. It will take very little work on the grading, but there will be two trestles and one steel bridge. A commissary has been placed at the mines, and the temporary power plant will be replaced with one of seventy-five horse-power. The coal of Virginia has been fully tested, and makes a splendid article of coke.

The Tennessee Company is getting ready to go to work on the construction of the large structural iron and steel plant at Ensley. The Birmingham Southern has been instructed to build the tracks to the site, and it is thought work on the buildings will be commenced in a few days. Progress is being made on the power-house for the coke ovens at Ensley, and much more equipment will be provided for. An addition has been made to the pouring floor at the steel mill, which caused an extensive outlay, and it is pretty certain that a new boiler works will be built, in which can be repaired all the machinery and structural work at the mill.

The visit of President Yoakum and party of the 'Frisco system on Monday is thought to presage several good things. One of these is said to be the practical settlement of all differences between the Belt Line, owned by the 'Frisco, and the Seaboard, over terminals and franchises. Though nothing along this line has come out, it is heard that matters have progressed so far toward peace that the case will never be put before the Supreme Court. The party visited Bessemer, where the yards will be enlarged and made more convenient as a consequence, and saw other points in the district with a view, it is pretty certain, to selecting a site for a plant of the American Car & Foundry Co. Another man of importance with the party was Mr. R. Galloway, president of the Galloway Coal Co., with mines at Carbon Hill, Galloway, and extensive new openings in Bibb county, on the Mobile & Ohio, and near the Birming-

ham Mineral road. Others in the party were Vice-President of the Frisco B. F. Winchell, Vice-President and Treasurer C. W. Hilliard of the Chicago & Eastern Illinois, and H. J. Bowdoin of Baltimore.

The rolling mills of the district are handicapped by lack of men. Mr. J. D. Dwyer, who was superintendent for so long at the Birmingham mills, has accepted service with the Southern Car & Foundry Co. at Anniston. He will need seventy new men over there, and will take them from Birmingham, it is expected, for all his old men are very fond of him. The mills are crowded with orders, and cannot keep up. The machine shops have a heavy run of business, but are handicapped by the continuance of the machinists' strike.

It is expected that the contract for the construction of the North Alabama Railroad will be let this week. This line will leave the Louisville & Nashville at Boyles and run toward Coalburg, branching out to various mines. There will be about thirty miles of track. The charcoal furnace of the Southern Car & Foundry Co. at Gadsden is to be blown in tomorrow. This is one of the largest charcoal stacks in the South. It was thought to be worthless until bought by its present owners. A modern electric plant has been built for lighting, and its power will be used for conveying the wood from barges to the charcoal ovens. Material for twenty barges is on hand. The output will be sixty tons a day. As soon as this furnace is going all right another will be constructed right beside it.

Work is to go ahead on the big trunk sewer which the county will construct through the valley. The contractors have agreed to take the \$300,000 of bonds, and have perfected arrangements to place the bonds in New York. This will cause the sewers to be finished earlier than was expected.

The Commercial Club is trying to locate a plant, understood to be a glass factory, with a capital of \$100,000. A site of five acres is asked.

Bart. Cowden, district freight and passenger agent of the Seaboard Air Line, has been at Anniston recently looking over the field. He is gathering data about the present and prospective tonnage of the Anniston district to be submitted on the proposition to build from Jacksonville over there, twelve miles, which is regarded as practically certain.

A very superior class of brown marble taking a high, perfectly smooth polish has been found near Tredegar by the Anniston Lime & Stone Co.

The Birmingham Ice Factory will double its plant at Ensley. Nixon & Co. have located near Ensley to make barrels and other wood products. H. W. L.

SOUTHWESTERN OIL.

Conditions in the Texas and Louisiana Fields.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, October 1.

The Spindle Top oil fields have resumed normal conditions after the disastrous fire. Shipments have again assumed the average of 45,000 barrels per day by rail and water combined. Prices are again showing a slight upward tendency after a lull just following the fire, when the rapid advance was most expected. The beginning of the sugar refinery operations in Louisiana, the approach of winter and the fact that during this month there will be at least two new refineries to start using Beaumont oil will all tend to send things upward.

The fire caused new and larger contracts for developments. These came in bunches, and there is more drilling on the Hill than there was all through the summer. Some enterprising Texans have closed contracts

for the drilling of several wells between Beaumont and Corsicana at various points. This means that the State of Texas has taken such a forward step in the oil march there is plenty of capital coming in to stimulate further wild-cating. If any oil is to be found anywhere in Texas it will not lack for the men to push the experiments.

The Sour Lake and Saratoga fields are not being pushed forward with the rapidity that was expected some two or three months since, though it is not for the lack of oil, but with the approach of winter there will be a resumption of activity. The Jennings (La.) field is running along at a normal gait, the shipments from there being good, though the property is too well in the hands of a few to allow the wild and irrational waste and promiscuous drilling that was the case in the experimental stage of Spindle Top. It is possible that there is a slight decrease in pressure there, and that was what was expected, for the field, as little as was thought of it, has been shipping almost as much oil as has Spindle Top. It will be a long time before that field ceases to produce of its own accord, however, and the value of it to Louisiana is something very great.

The Spindle Top field has been going through a sort of salt-water stage. It caused alarm all during the latter part of September, but is now in a fair way to be checked. First, it was thought that the sea water was forcing itself in upon the oil sands. This idea was thrown aside when it was shown first that the salt water only reached a few feet into the wells when allowed to come in, and that the bottoms of these wells was 1000 feet below the sea-level, and water always seeks its level. Then, to make sure, Dr. Robert Steiner made a chemical analysis of the water, and another was made in New Orleans, and both proved conclusively that the ingredients of the water were foreign to sea water. It was then found that the water was creeping in from abandoned wells on the Hill, and a fund of \$3000 was raised here for the purpose of cementing the bottoms of those wells to stop the entrance of salt water to the sands. This is practically certain of success now, and no further danger is apprehended as to the oil flow on that field.

The Central Asphalt & Refining Co. and the Burt Refinery will each begin operations this month.

Foreign Trade Hints.

Alfredo Vital of 39 Consijo de Ciento, Barcelona, Spain, writes to the Manufacturers' Record that he thinks there is a good outlet in Spain for American caustic soda. He said that a great deal of soap is manufactured in Spain requiring quantities of caustic soda. Great Britain now controls the market for that, and Mr. Vital thinks that Americans might be able to compete successfully with England.

A. Hinrichsen, No. 97 Rue Vanderlinden, Brussels, writes to the Manufacturers' Record that he has excellent business connections in Siberia, Persia, Asia Minor and North Africa, which would be of value to him as a representative of American manufacturers of building material and railroad supplies.

Vicente Merle of Valencia writes to the Manufacturers' Record that he would like to get into communication with American handlers of a lower class hide used at Valencia for strengthening fruit cases, and also with manufacturers of glycerine.

Arthur Behrens of St. Petersburg writes to the Manufacturers' Record that he would like to handle American makes of a composition of valves similar to the composition containing copper and tin, but containing very little copper.

Significance of the New Furnace at La Follette, Tenn.

By THOMAS P. GRASTY.

[Written for the Manufacturers' Record.]

On Wednesday last the wires announced that the new 350-ton furnace of the La Follette Coal, Iron & Railway Co. had been put in blast. This brief item means a great deal more than the mere starting up of a furnace, the largest in the South though that furnace be. It means that a vitalizing spark has been applied to sleeping forces of extraordinary immensity and incalculable value. It means, in the opinions of experts who have studied the conditions in and around La Follette, that under enlightened direction there may be witnessed in this beautiful Powell's valley the upbuilding of another Birmingham, with an even wider diversity of industries than are practicable at Alabama's great and growing center.

About twelve years ago the writer had allowed himself to be persuaded that at a certain point not far from Birmingham pig-iron could be produced at less cost than anywhere in the South, and had so stated in an article on iron production which appeared in the Manufacturers' Record. Not long afterwards he happened to be in Frankfort, and very naturally went to pay his respects to Mr. John R. Procter, at that time State geologist of Kentucky, but now president of the United States civil service commission at Washington. The first question asked by this eminent expert was whether the writer had ever been to Big Creek Gap, in Campbell county, Tennessee. Upon being assured that he had never so much as heard of Big Creek Gap, Mr. Procter remarked: "If you will go there and take pains to study the situation, I believe you will change your mind concerning the place where pig-iron can be made at least expense."

What was then called Big Creek Gap is today La Follette, which a great many people think is going to be as big a town as Knoxville or Chattanooga, and now that a large up-to-date furnace (the only absolutely modern furnace in the South except the one at Thomas, near Ensley, Ala.) has been completed here and put in operation, we shall soon know beyond peradventure whether Professor Procter was right or wrong. If he was right, then, in view of the extent of the ore deposits and of the acreage underlaid with superior coking coal owned by the company which owns the new furnace, no further fact or argument is required to prove that La Follette is susceptible of being made a great iron center; for it goes without saying that iron-making will go on most uninterruptedly at the point of cheapest production, and that iron-consuming industries will gather around that point and likewise keep going when less advantageously-located rivals are still.

But La Follette will be very much more than a mere iron center, because an abundance of just such hardwoods as those abounding hereabout is a necessary raw material to some of the largest iron-consuming plants, such as wagon factories and implement works; in fact, the extent and variety of timber resources within easy reach of any iron-making town is a factor of almost paramount importance in calculating its growth and development.

Moreover, there is enough yellow poplar, ash, white and red oak, walnut, maple and cherry nearby to attract furniture factories sufficient to upbuild here another Grand Rapids.

It is stated by trustworthy men intimately familiar with this section of East Tennessee and Southeastern Kentucky that there is within twenty-five miles of

La Follette more than 250,000 acres of virgin forest that will cut not less than 8000 feet of lumber to the acre. Investigation by those qualified to give accurate expert information concerning these timber resources is challenged so eagerly and confidently by substantial "old citizens" that I am tempted to assert that there is around La Follette more good timber suitable for factories making vehicles, implements and furniture than is to be found at any other point in America where iron in any considerable quantity can be produced.

The facts above stated are of sufficient significance to arouse in the public mind a wholesome curiosity to know more about a locality possessing such an extraordinary combination of resources. But public interest in bare resources is limited to a very narrow circle made up of those who may be designated "industrial pioneers." To the great business world the time to throw the light on what is here had not come until this furnace was blown in. The majority of business men in commerce and manufactures await developments before giving much attention to anything that may be said about "Nature's Bounteous Gifts," the indications of which in so many cases turn out to be "a delusion and a snare." Manufacturers especially prefer that the pioneers shall "blaze the way" and smooth the road before devoting precious time to the consideration of pictures of unexplored wildernesses, no matter how faithful or skillful the painter's work.

But La Follette has got out of the wilderness stage, and the starting up of this furnace brings a number of proven facts well within the short radius of the business man's personal interest. And so from now on, whatever goes out about La Follette will not fall on inattentive ears. The history of La Follette's development is the history of a long and courageous contention with difficulties and obstacles. It is the story of how well-directed and steadfast endeavor, backed by the judicious expenditure of money, has smoothed the road for men with energy and enterprise and means to travel with safety and profit.

Thoroughly realizing the significance of the completion of the La Follette furnace, I came here a week ahead of its going into blast in order to investigate conditions concerning which so many glowing predictions have from time to time been made. No honest man who witnessed the effects of the premature "booms" that beguiled and "led victim" so many of us here in the South just before and after the year 1890 can fail to feel a certain hesitancy in telling even the naked truth about a new town, if, forsooth, the telling of the truth is likely to raise in the reader's mind the faintest suspicion of exaggeration. No fair description of La Follette's resources, now so thoroughly demonstrated by the prodigious development work which Mr. John E. Searles, president of the La Follette Coal, Iron & Railway Co., and his associates have been doing here during the last two years, can be written so as not to sound like exaggeration. It is difficult to estimate the value to the South and to the nation of such a combination as a five-foot vein of good iron ore, ten miles without a break, and alongside of it thirty-odd thousand acres underlaid with a clear four-foot seam of coking coal, with an ideally accessible outcrop, besides another vein just as good underlying two-thirds of that immense acreage, and still a third seam between

these two cokers and steamers of excellent domestic coal. These two big underlying sources of wealth—ore and coal—are here, and the one is being mined within half a mile of the coal, and right between them lies a world of limestone for furnace flux.

Too much importance cannot be given to the fact that the quantity and quality of all the elements requisite to iron production on a large scale have been carefully proven. In the old "boom" days it used to be in order to find an outcrop of ore or coal, and then at some remote point another outcrop, and then forthwith give it out with a great flourish of trumpets that the entire intervening space was underlaid as indicated by these isolated showings at the surface. But the reverse has been the course pursued at La Follette.

There was a most excellent reason for proving everything by literally probing to the core before expensive developments, such as the building of a furnace, were undertaken. Some years ago all this land was bought by a company known as the La Follette Coal & Iron Co., but before its work got much beyond the experimental stage along came the panic of 1893 and the money gave out and a receivership ensued. Now, as everyone knows, it is much harder to raise money for an old scheme that has had a "black eye" than for a brand new one, and so when new money was finally raised (through the undaunted faith and untiring energy of H. M. La Follette) the plan pursued in its expenditure was strictly in harmony with Davy Crockett's motto, "Be sure you're right, then go ahead." Thus, the new company made sure of the quantity and quality of the coal before building coke ovens, and made doubly sure of the quantity and quality of the iron ore before deciding to build a furnace; and so all along the line. Test pits were dug in the ore and experts employed to tell what they proved; then more test pits and other experts, the last one of these being that cruelly conservative geologist, Charles Catlett of Staunton, Va., who I have sometimes thought actually takes a sort of pleasure in proving mineral properties to be valueless. As a result of this hewing to the line—this "be-sure-you're-right" policy—conditions were developed which so impressed one of our great railway presidents—the one with the eye of a hawk in the discovery of traffic and the swoop of an eagle in pouncing upon it—that he conceived and proceeded to execute with lightning rapidity a plan of extension that came near causing a sort of Hatfield-McCoy affair between the employees of the Louisville & Nashville and those of the Southern over the possession of strategic points for railroad construction in this vicinity.

The materialization of Mr. M. H. Smith's latest idea will give to the great system of which he is the president a low-grade line from Jellico, the present terminus of its "Knoxville branch," through the very "fat" of this great freight-producing territory into the city of Knoxville, where it will connect with the Atlanta, Knoxville & Northern (now a part of the Louisville & Nashville), thus creating a link in what will be a new trunk line from Louisville to Atlanta. This will put La Follette coal into Atlanta with a haul of less than 250 miles, and into Savannah and Brunswick with about the same haul that it takes to put Pocahontas coal into Norfolk. Besides the advantages that will result from this new line as an outlet to tidewater and to the Ohio river for La Follette products, it will bring into closer reach vast areas of timber lands hitherto inaccessible.

Meanwhile the town will continue to have over the Tennessee Northern

(owned by the La Follette Coal, Iron & Railway Co.) a connection with the Southern Railway at La Follette Junction, which is ten miles from La Follette and thirty-five miles from Knoxville. These two great systems, the Louisville & Nashville and the Southern, will give to La Follette all the railroad facilities that any Southern city needs, even though there should never be built another mile of track between the Ohio river and the Atlantic coast.

The lands owned by the La Follette Coal, Iron & Railway Co. consist of about 35,000 acres in fee and several thousand additional acres of "mineral right." These encompass the town and extend north to the Kentucky line, embracing the cream of the timber to be found in this section. Thirty thousand acres are underlaid with the "Rex" seam of steam and coking coal, which averages about four feet in thickness and is absolutely clean. Just above the "Rex" is the "Kent" seam, equally good for coking, and so good for steam that it is preferred, so I am told, for the locomotives of the Southern Railway over any coal mined in Kentucky or Tennessee. It is found under about 25,000 acres. Another important vein of rare excellence for domestic use is the "Gem," which is found between the "Rex" and the "Kent." There are a number of other coal seams on this property, but these three are enough for a century or two. Besides coal to supply the coke ovens to keep the big furnace going (and enough of these are finished and in operation and under construction to give this monster furnace all the coke it can consume), there is producible from the mines now opened enough lump coal to bring to the company a large revenue. By the time the new railroad is finished, which will not be over ten or twelve months, the output of the mines now opened will reach 3000 tons a day, of which 2500 tons will be merchantable lump coal, the other 500 going into coke. This output can be increased almost without limit at comparatively small expense on account of the accessibility of the outcrops. By simply driving new entries in the Kent vein, along the outcrop of which has been built a railroad to a conveyor of 2000 tons capacity, the output of that vein can be quadrupled so soon as the cars are obtainable.

The company's railroad from La Follette Junction (thirty-five miles northwest of Knoxville) through the town to the mines is an admirably-planned service line for the new furnace, besides providing an outlet to distant points. The arrangements for reaching the ore shafts and the coal tipples and the coke ovens and the limestone quarry are all that could be desired. There are three shafts now in going order on the 10-mile vertical vein of red hematite, which constitutes La Follette's greatest resource. This vein is a part of the well-known Walden's Ridge vein, which occurs at the Watts mines up toward Middlesboro, and has been mined for years at the Rockwood furnaces, southwest of here. It is as good or better ore than the average of Red Mountain at Birmingham, and in its formation reminds one very much of the vertical ore veins at Gadsden and Attalla. I was told by one of the mine foremen who had worked at other points along the Walden's Ridge vein that there was better ore here than he had seen elsewhere, i. e., richer and more uniform. The equipment of the ore shafts, as is true of all the equipment here, is of the newest and most efficient kind. The coal-washer, for instance, which is the largest washer of bituminous coal in the United States, will be the model until inventive ingenuity takes another step forward.

It would naturally be supposed that an

article written on the spot on the occasion of the blowing in of a furnace like the one here at La Follette would contain a complete description of that furnace, and so it should; but to be of any value a description of a machine so large, so skilfully planned, so splendidly built, would require so many technical terms and so many illustrations as to overshadow everything else. It is what the furnace signifies, not the furnace itself, that I am aiming to write about. The proper man to describe the furnace would be Mr. Kennedy of Pittsburg, its designer. Even by leaving the furnace out it will still be impossible to go into details concerning these phenomenal deposits of iron-making material without omitting features of greater interest to the public and of scarce less importance. The one thing that impressed me most favorably was the beauty of the scenery which the residents of La Follette will always have the privilege of enjoying. Another feature of still greater practical value is La Follette's healthy climate. The elevation is about 1200 feet, and the drainage is perfect. There are no swamps and no mosquitoes. And so there will be attracted here a class of people who would hesitate before locating on lower levels.

The most commendable feature in the management is perhaps the policy of resisting all temptation to encourage a "boom" in real estate. The company has actually made out no price-lists for its lots, of which it owns enough to pay, if sold at very reasonable prices, the cost of all its improvements to date and create a handsome surplus for additional ones. The clamor for houses is now getting to be so urgent that the company cannot much longer afford to keep its lots off the market without seriously impeding the substantial growth of the town. People have to have houses, and the best class of people like to own the land and build their houses to suit their own needs and tastes. And speaking of houses, those built by the company (and there are about 700 of these) for its own employees are models of comfort inside, and are unusually attractive in appearance. Taken altogether, they are superior to any I have seen in the South built for day laborers by an industrial corporation.

There is a large school building, but it holds only about half of the children of school age. The others are being temporarily taught in rented rooms. Two more very commodious schoolhouses are under construction. In respect to churches, La Follette is unusually well equipped. And speaking of churches reminds me that one of the finest to be found in the State outside the large cities is now being built here by the Methodists. It will be of sandstone, large quantities of which, and of excellent quality, are in quarries inside the town limits. Not far from this sandstone quarry is one of limestone, which occurs in layers just the right thickness for street curbing. Another material which will be converted into a commodity used in building is an immense deposit of sand suitable for making the finer grades of glass.

What will lead to the building of better houses than are usually to be found in industrial towns is the abundance and consequent low cost of lumber. Brick likewise is being made here very inexpensively, owing to cheap coal and a clay of special fitness for brick-making.

In 1900 the census gave La Follette 366 inhabitants. A recent school census developed the fact that the present population is about 8000. The city has the advantage of being organized under a very desirable special charter, granted by the legislature to meet the requirements of an industrial center. Under this the city government has been fully organized. It

is only a matter of a year or two when the county-seat will be established at La Follette, and looking to this \$100,000 of county bonds have just been issued to build a system of macadamized roads radiating from La Follette. A complete system of water-works, electric lights, an ice plant, all under one management, is about to be installed. And speaking of ice recalls the fact that it never gets hot enough in summer for the dweller in La Follette to dispense with a blanket at night.

Indeed, La Follette, by reason of the rare beauty of its scenery and its exemption from extremes of heat, would have made a fine summer resort if it hadn't been developed into an industrial city.

GRAZING IN THE SOUTH.

Profit in Cattle-Raising in Georgia and Florida.

In a recent issue of the Manufacturers' Record Mr. Charles J. Haden of Atlanta contrasted the grazing potentialities of South Georgia with the grazing regions of the West. The Manufacturers' Record received a letter from a leading railroad official making an inquiry as to whether the native grasses of Georgia and Florida were as nutritious as those of the West. In reply to this question Mr. Haden, who has given the matter close study, writes the Manufacturers' Record as follows:

"I am glad that this question has been raised. I know that in the West the impression prevails that the native grasses of Georgia and Florida are not nutritious, but this is a mistake. 'Nutritious' is a relative term. It is possible that, pound for pound, the native grass of the Western plains has more flesh-producing power than an equal quantity of grass of the pine lands, but there can be no reasonable doubt that acre for acre the converse is true. Our Georgia and Florida grass grows taller and denser.

"For sixty years or more cattle and sheep have been successfully grown for market in South Georgia and Florida without other food at any time of the year than the indigenous grasses. I have before me a certificate of J. H. Inman, an intelligent cattleman of Argyle, Clinch county, Georgia, who states that he has been in the cattle business thirty-five years continuously on a moderate scale, and 'the cattle will fatten on the range on the wild grass about nine months in the year, and will live on the range without other food the entire winter.' He says, however, that to supplement with tame grasses is very valuable. I have been an owner of lands in that section for many years, and can verify what Mr. Inman says.

"Last week while in Clinch county I found the cattle were as sleek and fat as the best I saw in my journey across the plains. The breed of South Georgia cattle is small; so were the cattle in the early range days of the West. In the West they were bred up from a 600-pound average animal to a 1000-pound average, and the same can be done in the Southeast. This fault is in the grower, not the grass.

"If fires are kept out of the forests for two consecutive years or more, the volume of grass is very greatly increased. When thus protected there appears a growth of very valuable evergreen shrubs, excellent for grazing, and, best of all, the wild oats, the finest of all wild grasses. When the white man first occupied South Georgia he found the forests covered in wild oats. They were destroyed by annual forest fires, and cannot be brought back within only one season's freedom from fires."

State Geologist W. S. Yates of Georgia has collected the material for a report of the granites of the State.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

BUILDING IN WEST VIRGINIA.

More Than 1600 Miles of New Railroads Under Construction and in Prospect.

West Virginia is the scene of much railroad activity this year, there having been either incorporated or begun since January last forty lines, all of which, except two or three, which are to be operated by electricity, will be standard-gauge steam roads. Some of them are small branches or extensions designed to reach coal mines, but the majority are roads of some length for both passenger and freight traffic. In addition to these new projects old companies have under way fourteen extensions, and it is reported that nine other extensions will also be built. Four new companies to build entirely new lines are in prospect, and five street railways have been organized. Outside of the street-railway projects, these enterprises represent more than 1600 miles of line.

Among this railroad work the Wabash's extensions are probably more interesting than any other construction now in progress, for the reason that they will bring another large system into the State. These extensions will be in connection with the Little Kanawha and West Virginia Central railways, and to build them several companies have been incorporated, including the Burnsville & Eastern, the Zanesville, Marietta & Parkersburg, the Parkersburg Bridge Terminal Railroad and the Buckhannon & Northern. The Burnsville & Eastern is to be about sixty miles long, and will make the connection between the Little Kanawha and the West Virginia Central. Mr. S. D. Brady of Parkersburg is the chief engineer. The Buckhannon & Northern, about thirty-five miles long, will extend from a point near Buckhannon and connect with the Baltimore & Ohio at Fairmont. A. S. Brady of Clarksburg is one of the incorporators. The Zanesville, Marietta & Parkersburg will make the necessary connections into Ohio.

Another big piece of work is that being done between Naugatuck and Kenova by the Norfolk & Western Railway, which incorporated the Kenova & Big Sandy Railroad for the purpose of constructing this new line, about fifty miles long, which is to shorten the distance and make easier grades. The incorporation of the Virginia & Atlantic Railroad is also announced, to build a line in McDowell county down the Dry Fork of the Tug river about twenty miles to connect with the Norfolk & Western, J. F. Brown and others being the incorporators. From Huntington it is also reported that the Island Creek Coal Co. will build twenty miles of line to reach the Norfolk & Western at Dingess, the United States Oil Co. of Boston being interested. The United States Coal & Coke Co. has also under way a 10-mile branch from Welch to a new coal field.

The Chesapeake & Ohio Railway is building forty-six miles of an extension of the Guyandotte Valley line, also twenty miles on the Coal River extension at Cabin Creek. It is further reported that the Piney branch will be extended to coal fields, and a letter from Ansted says that the Deepwater Railroad of the Chesapeake & Ohio will be extended to the Virginia State line, while from Scarbro comes the news that the White Oak Fuel Co. is building seven miles of line to reach coal lands, and which will connect with the Chesapeake & Ohio.

The Baltimore & Ohio Railroad has

undertaken some important work in West Virginia by building the North Mountain cut-off, ten miles long, from Wilson's, a short distance west of Martinsburg, to Cherry Run; this makes a low-grade freight line. The Baltimore & Ohio has also made surveys for a low-grade freight line between Martinsburg and Harper's Ferry, about seventeen miles. A lumber line branch about six miles long is being built from Savage river by Dubois & Brown Bros. to connect with the Baltimore & Ohio at Piedmont. It is also reported that the Baltimore & Ohio will build a connection with the West Virginia Short Line, and at Fairmont that it will build a three-mile connection to link the Pittsburg branch with the main line. Work has steadily continued on the Patterson's Creek cut-off below Cumberland.

A group of railroad companies in which John T. McGraw, M. D. Post and others of Grafton are interested have also been incorporated. They are the Greenbrier, Monongahela & Pittsburg Railway, chartered to build from Pocahontas county to Parsons and to Point Marion, about eighty miles; the Rowlesburg & Parsons Railway, to build from Powellton to Parsons, 115 miles; the Elk Valley & Midland Railroad, to build from Centralia, on the Baltimore & Ohio, along Elk river via Addison to Clover Lick, forty miles, and the Holly River & Addison Railroad, to extend about ten miles.

Among the new incorporations are the following:

The Bismarck & Potomac Railroad, to build from Bismarck to near Winchester, Va., about sixty miles. B. J. Smith of Philadelphia is president, and C. M. Bolton of Rio, Va., is engineer.

The Midland Railroad, to build from Parkersburg to North River Gap, about 140 miles, to which point the Chesapeake Western Railroad has been building an extension. J. W. Rinehart, P. O. Box 1995, New York city, is interested in this line.

The Clarksburg & Southern Railroad has made a survey for a line from Clarksburg along Freeman's Creek valley to a point in Gilmer county, about thirty-five miles.

The Hinton, New River & Western Railroad is to build a branch from Hinton along Bluestone river, twenty miles. A. M. Hatch of Hinton and others are interested.

The Citizens' Electric Railway Co., with headquarters at Moundsville, is to build twenty-five miles of line; president, C. A. Weaver; treasurer, H. W. Hunter; secretary, A. J. Jones.

The Moundsville & Waynesburg Railroad proposes to build from Moundsville to Waynesburg, Pa., via Cameron. This line would be about thirty-two miles long, but only fifteen miles in West Virginia.

The Kanawha, Glen Jean & Eastern Railway, headquarters at Glen Jean, has made surveys between Thurmond and Oswald, fifteen miles; S. M. Veal, secretary.

The Iron Mountain & Greenbrier Railroad, incorporated to build from White Sulphur Springs to Iron Mountain, on Anthony's creek, about fifteen miles; headquarters at Clarksburg.

The Coal & Coke Railway Co., to build from Elkins to Glenville, about fifty-five miles; Henry G. Davis and others, incorporators.

The Tri-State Terminal Railway, incorporated at Huntington, W. Va., by W. C. Merritt and others to build from Huntington to Ironton, Ohio, via Ashland, Ky., about twenty-five miles, but only ten miles in West Virginia. At Huntington it is reported that the Camden Interstate Railway Co. will build an extension along the Kanawha from Charleston to Mt. Carbon,

about thirty miles. The West Virginia & Kentucky Railroad, chartered by W. C. Merritt and others to build from Sutton, W. Va., through Kentucky to Ironton. This line would be about ninety miles long in West Virginia.

The Ronceverte, Lewisburg & Western Railroad, about ten miles long, incorporated by D. T. C. Davis, Jr., A. F. Matthews and others of Lewisburg.

The Blue Creek & Belva Railroad, to build from Blue Creek, in Kanawha county, to Belva, in Nicholas county, about twenty miles. George R. Woodward of Penfield, Pa., and others are interested.

The Fairmont & Clarksburg Electric Railway, about twenty miles, by John A. Howard of Wheeling and associates.

The Morgantown Electric & Traction Co., to build a street railway; Walter L. Webb, chief engineer.

The Cheat River Railway, to build from Parsons to Rowlesburg, and thence to a point near Cheat Haven, Pa., about fifty miles; Wesley Molloyhan of Charleston and associates.

The Big Sandy, East Lynne & Guyan Railroad, by B. J. Pritchard of Wayne and others, to build from the mouth of Whites creek, about twenty-five miles.

The Elk River, Falling Rock & Gauley Railway, to build from the mouth of Falling Rock creek, in Kanawha county, to the mouth of Twenty-Mile creek, in Nicholas county, about twenty miles; W. A. MacCorkle, W. P. Stone and others of Charleston, incorporators.

The Charleston, Winchester & Berryville Electric Railway, incorporated to build a line connecting Charleston, Winchester, Berryville, Halltown, Harper's Ferry, Martinsburg, Shepherdstown, W. Va., and Hagerstown, Md., making 120 miles of line. George S. Eyster of Halltown is president.

The Elkhorn & Tug River Railroad, to build from the mouth of Brown's creek to Welch, about ten miles, by W. C. Hall and others.

The Charleston, Parkersburg & Western Railroad, by E. B. Neal and others, to build from Charleston to Parkersburg, about sixty-five miles.

The Morgantown Electric & Traction Co., by J. C. White and associates, to build a street railway.

The Fairmont & Clarksburg Street Railway.

The Sistersville & Middlebourne Electric Railway, about seven miles long, by John A. Howard of Wheeling and others.

The New Martinsville Electric Light, Heat & Power Co. proposes to build a street railway.

The Wheeling, Waynesburg & Eastern Railroad of Wheeling; Mark W. Potter, president. About twelve miles of this line would be in West Virginia.

The New Martinsville & Sistersville Street Railway Co. has applied for a franchise in New Martinsville; E. L. Robinson, attorney.

Among the different pieces of work in progress are the following: The Campbell's Creek Coal Co. of Dana is building fourteen miles of line from the Kanawha river to near Charleston; J. E. Dana, superintendent. James E. Davies of Williamsport, Pa., and J. M. Guffey of Pittsburg are interested in completing a line down Cheat river to Point Marion. The Cherokee Colliery Co. of Welch is building a railroad at the head of the North Fork branch. The Clover Run Lumber Co. of Parsons is building six and one-half miles of line. The Pocahontas, Coal River & Kanawha Railroad has thirteen miles of new line under contract; W. A. Flanagan of Charleston, secretary. The McKell Coal Co. of McDonald is building an extension of about twelve miles on

Loup creek, and it is reported will build to Thurmond, making ten miles additional. The Charleston, Clendennin & Sutton Railroad, having completed the extension from Charleston to Otter, will, it is reported, build to Sutton, about twenty miles distant.

The following are some of the new propositions: An electric railway from Bluefield to Welch, forty-two miles; J. W. Reardon is mentioned as being interested with a New York syndicate. A coal road in Gilmer county; Henry C. Jackson of Parkersburg and others. A line from Fairmont to Arnettsville, eight miles; Henry G. Davis of Elkins and Thomas W. Fleming of Fairmont are reported interested. An electric railway from Wheeling via West Liberty to Bethany, about twelve miles; W. L. Hearne of Wheeling and others. The Champion Coal & Coke Co. of Laurel Creek is to build a two-and-one-half-mile extension. The Charleston & Kanawha Valley Traction Co. is to build a street railway extension to Ruffner and Two Mile; Russel A. Brown of Cleveland, Ohio, and others. An electric railway from Bluefield to Princeton and Camp Creek, seventeen miles; Dr. F. W. Smith of Bluefield and others are interested. An electric railway from Grafton to Fetterman and other points, besides building a street-car line in Grafton; B. F. Bailey of Grafton and associates.

The Pennsylvania Railroad Co. will, it is reported, extend the Pittsburg, West Virginia & Charleston line to Morgantown, and the Ohio Valley Traction Co. of Wheeling is to build a line via Chester.

The Wheeling City Railway, it is said, will build from Benwood to McMechen, as well as up Caldwell's run and along the Fairmont turnpike. From Elkins it is reported that Senator S. B. Elkins will build a railway from newly-purchased coal lands to connect with the Baltimore & Ohio at Rowlesburg. At Wheeling it is said that the Panhandle Traction Co. will extend to Mahans, four miles north of Wellsburg and fifteen miles from Wheeling. The Morgantown & Kingwood Railroad will, it is stated, be extended from Reedsville to Belington, about thirty-five miles; Geo. C. Sturgiss of Morgantown is president.

LOUISVILLE & NASHVILLE DEAL

Control Goes to the Atlantic Coast Line Co. Through a Syndicate.

Advices from New York state that a deal for the control of the Louisville & Nashville Railroad by the Atlantic Coast Line Railroad Co. of Virginia has been closed, and that a syndicate takes at \$150 a share the 306,000 shares of Louisville & Nashville stock purchased by John W. Gates and Edwin Hawley several months ago, the alleged cost to Gates and his friends having been \$143. According to these figures the Gates party makes a profit of \$2,142,000 on the transaction. It is further stated that the syndicate sells the stock to the Atlantic Coast Line for \$10,000,000 cash and \$35,000,000 in 4 per cent, 50-year collateral trust bonds secured by the 306,000 shares of Louisville & Nashville stock and \$5,000,000 in Atlantic Coast Line stock, \$1,000,000 of the latter going to J. P. Morgan & Co. for their services as syndicate managers. Nothing is yet announced regarding terms to be offered to minority stockholders in the Louisville & Nashville Railroad Co., but it is reported as coming from a member of J. P. Morgan & Co. that the rights of every stockholder will be preserved.

The conclusion of this deal places three large railroads under the control of the Atlantic Coast Line, namely, the Atlantic Coast Line Railroad and the Plant System, making a total length of 4156 miles, and the Louisville & Nashville, including

3336 miles of line. As the Louisville & Nashville controls the Nashville, Chattanooga & St. Louis Railway, with 935 miles of line, the deal practically consolidates 8427 miles of railroad extending from the Atlantic ocean to the Mississippi river and from Chicago to the Gulf of Mexico, the Louisville & Nashville reaching to the lakes through its half interest in the Monon route.

The Atlantic Coast Line and the Louisville & Nashville railroads now touch each other in Georgia and Florida, but they are not actually competing roads, and the obtaining of control by the former of the latter is therefore not in violation of the laws of several Southern States, which prohibit the combination of competing companies. Operating together, then, these three companies will make practically a new system reaching from Punta Gorda, Tampa, Palatka and Jacksonville, in Florida, to New Orleans, Chicago and Washington, including all important intervening points.

The annual reports of the different companies for the fiscal year ended June 30 show gross earnings as follows: Louisville & Nashville Railroad, \$30,712,257; Atlantic Coast Line, \$8,549,526; Savannah, Florida & Western (Plant System), \$8,475,501; Nashville, Chattanooga & St. Louis, \$7,992,530. This makes a total of \$55,729,814, not including the earnings of every one of the smaller lines controlled and operated in these systems.

In connection with the announcement of this deal it is also stated that the combination will not disturb the general railroad situation at the South, and that harmonious relations will continue between all the great companies in that section of the country.

It is furthermore to be noted that the Louisville & Nashville is completing and will next year have finished a new route between Cincinnati, Chicago and Atlanta via the Knoxville, LaFollette & Jellico and the Atlanta, Knoxville & Northern railroads, the first of which is an entirely new road, and the latter is an existing line which is to be extensively improved for fast passenger and freight service.

Coal-Mine Combination.

It is reported from South McAlester, I. T., that plans are being made for a consolidation of some of the largest coal mines there in the interest of the Chicago, Rock Island & Pacific Railway.

Railroad Notes.

A dispatch from Cleburne, Texas, says that the Dallas, Cleburne & Southwestern Railway is fast nearing completion, and that it will be operated by the Missouri, Kansas & Texas under a lease.

Mr. C. H. Ackert, general manager of the Southern Railway Co., writes to the Manufacturers' Record from Washington, D. C., saying that there is nothing in the rumor that the company will remove its shops from Selma, Ala., to another point.

The Wilkes Telephone & Electric Co., which has been incorporated at Washington, Ga., to build telephone lines in Wilkes county, will, according to Mr. Boyce Ficklen, its secretary and treasurer, later build an electric railroad. The capital stock of the company is \$5000, but it may be increased to \$500,000.

Mr. J. F. Wallace, assistant general manager of the Illinois Central Railroad, has been promoted to be general manager, the duties of which position have hitherto been performed by Mr. J. T. Harahan, the second vice-president of the company. Mr. W. J. Harahan, the chief engineer, has been made assistant general manager, and H. U. Wallace, general superintendent of the Freeport division, has been appointed chief engineer.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

SOUTHERN MILL ADDITIONS.

Progress During Third Quarter—About \$6,500,000 to Be Invested.

With the closing of the third quarter of the year the Manufacturers' Record presents its usual table indicating the progress of the Southern textile industry during that period. It is needless to state that there has been a continuance of the decided activity in cotton-mill building and enlarging that has been observed this year.

The keynote of present progress seems to be the determination of Southern manufacturers to enter the field of fine-goods production. This tendency is pointed to by the announcements of mills to make the higher counts of yarns and fine cloth, two extensive establishments of this character having recently made known their intentions as to equipping plants. One of these is the \$2,000,000 plant that the Messrs. Duke and their associates of Durham, N. C., and New York, N. Y., will build at Dunn, N. C. They will have 70,000 spindles and 2000 looms for the production of denims and camlets, and will establish a modern mill town with every facility for health and convenience. The second, and most important of the projects of the quarter, was that of the Dan River Power & Manufacturing Co. of Danville, Va., full details of which were

presented last week. This is also a \$2,000,000 enterprise and the plans embrace 80,000 spindles and 2400 looms.

Another step towards fine-goods production is taken with the \$200,000 finishing plant of the Gaffney (S. C.) Manufacturing Co., which current dispatches state is nearing completion and will soon be in operation. With its completion this company changes its production from plain print cloths to fancy weaves, and all the bleaching, dyeing, printing, calendering and other operations in finishing will be done by the plant.

A most persistent fact noted in connection with the textile news is that a majority of the spindles are projected by the successful Southern cotton manufacturers—men who are fully acquainted with the resources of their section and base their decisions to increase investments on an experience of many active years in this industry.

An examination of the figures in the accompanying table shows an aggregate of 172,128 spindles and 4118 looms to be added by twenty established companies, representing an investment of about \$3,442,560, while 155,940 spindles and 4395 looms will be installed by thirteen new companies, representing an investment of about \$3,118,800. These figures total for the three months of July, August and September 328,068 spindles and 8513 looms, representing an investment of about \$6,561,360.

Following is the table of additions, grouped by States, of spindles and looms for the past quarter:

Alabama.		Spindles.	Looms.
*Pell City Mfg. Co. (given July 3, but announces 9600 more spindles and 280 more looms).....	Pell City.....	9,600	280
*Highland City Mills (new machinery to cost \$6000).....	Talladega.....	.....	.....
Georgia.		9,600	280
*Pearl Cotton Mills.....	Beverly.....	.....	120
*Standard Cotton Mills (enlargements costing \$500,000).....	Cedartown.....	.....	160
*Poulan Cotton Mills.....	Poulan.....	5,000	.....
*Anchor Duck Mills.....	Rome.....	3,500	.....
Maryland.		8,500	280
Whitehurst Belting Co. (uses looms).....	Baltimore.....	.....	.....
1 new mill.....			
Mississippi.			
Magnolia Cotton Mills.....	Magnolia.....	5,000	150
*McComb City Cotton Mills.....	McComb City.....	1,000	40
1 new mill.....		6,000	190
North Carolina.			
Appalachian Finishing Wks. (\$350,000 capital).....	Asheville.....	.....	.....
*Whittam Textile Co. (increase capital from \$25,000 to \$125,000 to enlarge).....	Asheville.....	.....	.....
*J. M. Odell Mfg. Co.....	Blynn.....	.....	150
*Ada Mfg. Co. (\$90,000 to enlarge; nothing definite decided).....	Charlotte.....	.....	.....
*Excelsior Cotton Mills (carried cottons).....	Charlotte.....	.....	.....
*Erwin Cotton Mills Co. of Durham, N. C. (given July 3, but having selected site for No. 2 mill, announces 35,000 more spindles and 1000 more looms).....	Dunn.....	35,000	1,000
*Harriet Cotton Mills.....	Henrietta.....	6,000	.....
*Randelman Mfg. Co.....	Randleman.....	2,500	.....
Southern Dyeing Co. (\$35,000 capital).....	Rockingham.....	.....	.....
Moorhead Cotton Mills.....	Spray.....	4,000	.....
2 new mills.....		47,500	1,150
South Carolina.			
Toxaway Mills.....	Anderson.....	10,000	325
Apalache Mills.....	Arlington.....	17,000	400
Broad River Mfg. Co. (capital \$100,000).....	Bookman.....	.....	548
*Clinton Cotton Mills.....	Clinton.....	22,528	.....
*Easley Cotton Mills.....	Easley.....	16,000	380
*American Spinning Co.....	Greenville.....	15,000	310
Woodside Cotton Mills.....	Greenville.....	10,500	300
*Greenwood Cotton Mills.....	Greenwood.....	10,000	300
Drayton Mills.....	Spartanburg.....	12,440	360
Arcadia Mills.....	Spartanburg.....	12,000	300
*Monarch Cotton Mills (given July 3, but now announces 8000 more spindles and 40 more looms).....	Union.....	8,000	40
*Williamston Mills.....	Williamston.....	5,000	150
6 new mills.....		138,468	3,413
Tennessee.			
*Brookside Mills (given July 3, but announces 38,000 more spindles and 800 more looms, to be added after doubling is completed).....	Knoxville.....	38,000	800
*Trenton Cotton Mills (increase capital by \$15,000).....	Trenton.....	.....	.....
Virginia.		38,000	800
American Asbestos Co. (Wm. C. Doak, president, Terre Haute, Ind.; to spin asbestos yarns).....	Bedford City.....	80,000	2,400
Dan River Power & Mfg. Co.....	Danville.....	80,000	2,400
2 new mills.....		155,940	4,395
13 new mills.....		172,128	4,118
20 established mills.....		328,068	8,513
Grand total.....			
*Established mills enlarging.			

New England Millmen.

At the semi-annual meeting this week of the New England Cotton Manufacturers' Association at New York the opening address was by President Charles H. Fish of Dover, N. H. The association was welcomed by Mr. James M. Dodge of Philadelphia, vice-president of the American Society of Mechanical Engineers, and by Mr. J. Temple Gwathney, president of the New York Cotton Exchange. Among the papers on the program were the following: "Lubrication of Textile Mills," by William F. Parish, Jr., Boston, Mass.; "Observations on Spindle Banding," by William D. Hartshorne, Lawrence, Mass.; "Tension on Roving Frames," by William E. Winchester, Philadelphia, Pa.; "Preparation of Cotton for Carding and Spinning, Especially Egyptian Cotton," by John J. Connell, Lowell, Mass.; "Overworking of the Cotton Fiber," by Alfred E. Adams, Whitinsville, Mass.; "Our Foreign Commerce in Cotton Goods," by O. P. Austin, chief of the bureau of statistics, Treasury Department, Washington, D. C.; "Mill Construction on the Continuous Skeleton System," by Sanford E. Loring, Syracuse, N. Y.; "Bleaching and Finishing of Textile Fabrics," by Arthur C. Freeman, New York city; "The Card System in Mill Supply Accounts," by Frank P. Vogl, Claremont, N. H.; "The World's Supply and Consumption of Cotton," by S. N. D. North, superintendent department manufactures, United States census, Boston, Mass.; "The Under-Feed Stoker," by Geo. C. Tewksbury, Boston, Mass.; "Tests of Cotton Yarns," by George R. Smith, Bradford, England; "The Management of Mills," by Charles W. Dennett, North Adams, Mass.; "The Export of Cotton Goods," by William P. Wilson, Sc.D., director Philadelphia Commercial Museum, Philadelphia, Pa.; "Cotton-Mill Expansion," by Arnold B. Sanford, Boston, Mass.; "Cotton Manufacturing in Belgium," by P. Van Godtsenhoven, Forest, Brussels, Belgium; "Report of Committee on Fire Test of Cotton Bales," by Edward W. Thomas, Coolemeec, N. C., and William D. Hartshorne, Lawrence, Mass.

Silk Culture and Manufacture.

The Sericulture Manufacturing Co. has applied for incorporation at Atlanta, Ga., placing its capital stock at \$2,500,000, with Messrs. Lewis B. Magid of New York and W. R. Sweet of Atlanta as incorporators. The company will be organized to carry out the extensive plans that Mr. Magid has in progress for silk culture and manufacturing in the South. Mr. Magid has been mentioned several times in connection with extensive plans of this character, and several months ago purchased 2500 acres of land at Tallulah Falls, Ga., and he has planted about 2500 mulberry trees for feeding silkworms. At the falls the company will develop two water-powers to furnish power for transmission by electricity. This power will operate the machinery for unwinding the silk cocoons. Mr. Magid's plans include the establishment of colonies of Italian and French farmers who are thoroughly versed in the silk industry.

The Toxaway Mills.

The stockholders of Toxaway Mills of Anderson, S. C., effected permanent organization during the week. Messrs. D. P. McBrayer, J. A. Brock, D. A. Ledbetter and F. G. Brown of Anderson, T. W. Woodward of New York, E. A. Smyth of Pelzer, S. C., and T. C. Jackson of Iva, S. C., were elected directors. Mr. McBrayer was chosen president. Particulars as to this company's purposes were announced in August, the initial equipment to be 10,000 spindles and 325 looms. It

has been decided that the building will be designed to permit of doubling the equipment whenever it is deemed advisable. Gray goods will be manufactured. Capitalization is \$225,000.

To Enlarge Next Year.

Mention was made several weeks ago of an unconfirmed report that the Griffin Manufacturing Co. of Griffin, Ga., had decided to double its plant. The rumors were not correct, but the company does contemplate enlarging during 1903. This enlargement will consist of the addition of 10,000 spindles and from 350 to 450 looms, and it is expected that the necessary buildings and machinery will be contracted for next year. It would require the expenditure of probably \$200,000 for this extension. Company's present plant has 16,336 spindles and 593 looms, manufacturing high-grade colored goods.

Another Mill at Anderson, S. C.

It is announced that another large cotton factory will be built at Anderson, S. C. The company that will build and operate it will be organized with capital stock of \$600,000, but it is probable the stockholders will not meet until January to elect officers and determine details. An equipment of 25,000 spindles and complement of looms (about 750) will be installed, and a high grade of cotton goods will be manufactured. R. S. Hill, president of Farmers and Merchants' Bank, is the promoter of the new enterprise, and has announced positively that the plant will be established.

The Cotton Movement.

In his report for September 26 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the twenty-six days of the present season was 1,017,252 bales, an increase over the same period last year of 453,423 bales; exports were 406,682 bales, an increase of 178,701 bales; takings by Northern spinners 83,317 bales, an increase of 29,326; by Southern spinners 153,800 bales, an increase of 16,300 bales.

Textile Notes.

Messrs. J. H. Parham, J. B. Milligin, R. B. Fothergill, J. A. Carter and O. K. Wilson have incorporated Chattanooga Cotton Felt Co., with capital stock of \$10,000.

James M. Catlett of Philadelphia, Pa., does contemplate establishing a knitting mill at Wilmington, N. C., as was stated last week. He can be addressed at 606 Arch street, Philadelphia.

A movement is on foot for organization of cotton-mill company at Central, S. C., and it is said that D. K. Norriss, president of Norriss Cotton Mills Co. of Cateechee, S. C., will be president.

Atlantic & Gulf Mills of Quitman, Ga., has declared an annual dividend of 6 per cent. This company operates 5000 spindles on the production of cotton hosiery yarns, and is capitalized at \$100,000.

Cleveland (Tenn.) Woolen Mills has purchased eighteen acres of land at \$8000 near Chattanooga. Company's intention is to erect thereon a woolen mill and remove a portion of its Cleveland machinery to this establishment.

Weatherford (Texas) Cotton Mills has decided to install a knitting plant, and thus be enabled to utilize its production of yarns. The company has had its cotton mill under construction for some months, and the 3500 spindles are now being installed.

Columbia Metallic Roll Co. of Columbia, S. C., has been incorporated, with capital stock of \$100,000, by Louis I. Guion, J. W. Babcock, L. J. Wrigley, W. B.

Smith Whaley and August Kohn. Company's purpose is to control a valuable patent on cotton-mill machinery recently issued to Mr. Guion.

J. M. Torrence of Huntsville, Ala., proposes organizing company to build a mill for the production of fine cotton goods. It is the intention to locate the plant in Western North Carolina. Mr. Torrence resigns as superintendent of the Lowe Manufacturing Co. of Huntsville in order to engage in this new enterprise.

Oxford Knitting Mills of Barnesville, Ga., is preparing to increase the present output of its plant for manufacturing high-grade ribbed vests, etc. An 80-horse-power boiler, a 60-horse-power engine, additional knitting machines and finishing equipment will be installed, and the company is in the market for the equipment.

In our issue of September 11 mention was made of the unconfirmed report that Muscogee Manufacturing Co. of Columbus, Ga., intended to build an additional mill to cost \$150,000. The company states that the proposed addition to plant has not progressed sufficiently to warrant any definite information being given at present.

Victor Cotton Mills of Charlotte, N. C., will resume operations October 9, after an idleness of several months. In making this decision the stockholders also announce that the question of changing from a spinning to a weaving mill will remain open until the annual meeting in January. The company was recently noted as considering such a change.

A \$200,000 company will be chartered and organized at Laurens, S. C., for the purpose of building a mill for the production of fine cotton goods. Laurens investors have subscribed \$75,000, and the remaining \$125,000 will be largely taken by New York capitalists. W. E. Lucas, president of the Laurens Cotton Mills, is at the head of this new enterprise. All further details will be announced later.

The efforts recently mentioned to establish a cotton mill at Ringgold, Ga., have proven successful, and charter has been applied for. Company will be known as Ringgold Cotton Mills, capitalized at \$100,000, half of which will be furnished by local investors. Water-power will be used to operate the machinery. W. H. Odell will be president; W. W. McClain, vice-president, and J. E. Satterfield, secretary. Walter N. Brown of Monticello, Ark., will be architect, builder and superintendent.

Work progresses steadily on the Washington Mills at Fries, Va., and the company expects to have its 40,000 spindles and 1100 looms in operation early in 1903. This extensive enterprise was announced about a year ago, and the power development and erection of buildings have since been in progress. The company's dam on New river is expected to develop about 6500 horse-power, but only about half of this energy will be used at first. The mill building is four stories high, 130x419 feet, constructed of brick. Capital stock is \$2,225,000.

Brenham (Texas) Cotton Mills, which contracted for its buildings and textile machinery (5000 spindles and 160 looms) last month, will open bids October 16 for furnishing and installing the required steam-power plant. Bids are to be submitted at prices free on board at Brenham. This steam plant is to include a cross-compound Corliss engine of 250 horse-power, with flywheel to admit of increasing 200 horse-power later; also two 250-horse-power water-tube boilers to burn oil as fuel and arranged to be changed to coal when desired, and feed-water heater, with two Worthington boiler-feed pumps.

MINING.

T. W. Pratt of Huntsville, Ala., and associates are making quite extensive tests in the coal fields around Gadsden, Ala., with the idea of developing a coal mine in that district. However, nothing definite has been decided.

La Belle Iron and Steel Works of Steubenville, O., has purchased 230 acres of Reading Creek coal land near Womelsdorf, W. Va. It is stated that the price paid, \$140 per acre, is the highest ever reached for this particular pocket.

A charter has been granted at Nashville, Tenn., to the New Cumberland Coal Co. of Roane county, the incorporators being Jesse L. Rogers, M. O. French, John W. Staples, John H. Hatfield and Saml. Staples. Capital stock is \$25,000.

A coal mine has been incorporated in Bell county, Kentucky, by the Stony Fork Coal Co., with offices at Middlesboro. The company has \$30,000 capital stock. Its incorporators are Hugh Drummond and George Duke, both of Bell county.

A charter of incorporation has been granted to Grier Mining Co. of Carterville, Mo., in the lead and zinc district. Messrs. W. B. Kane, W. B. Shackelford, J. W. Grier and others are the incorporators, and the capital is \$24,000, all paid in.

Messrs. A. M. Stull of Rich Patch, Va., and A. W. Persinger of Longdale, Va., have purchased 2200 acres of land near Clifton Forge, Va., at \$8000. Iron deposits underlay the property, and the purchasers propose preparing at once to open mines.

Marquette Coal Co. has begun extensive improvements at its mines near New Cumberland, W. Va. Its half-mile narrow-gauge railway is being changed to broad gauge and extended, while a new tippie will be erected and other machinery installed to double output.

Main Street Mining Co. of Carthage, Mo., has filed articles of incorporation stating that its capital is \$50,000 and fully paid in. Messrs. W. R. Logan, Perry Webster, L. E. Archias and others are the incorporators. This company is located in the lead and zinc district.

Harry B. Olmsted of Columbus, Ohio, is organizing company which will be incorporated for reopening an old coal shaft near Huger, two miles east of Welch, W. Va. This shaft has been idle since 1895. It is claimed that it is the only shaft mine in this coal field, the others all being drift mines.

Messrs. John and R. L. Ralston and others have applied for incorporation of the Stony Fork Coal Co., with a capital stock of \$50,000. They will mine coal in Claiborne county, Tenn., and Bell county, Kentucky, and will have main office at Mingo, Tenn.; branch office at Middlesboro, Ky.

The governor has approved the charter of the Acidine Mineral Co., Jackson, Miss., with a capital stock of \$25,000. The incorporators are S. J. Johnson, T. B. Gaddis, W. G. Wells and others. The object of this company is to manufacture acid iron mineral from earth secured in Newton county.

Drakesboro Coal, Coke & Manufacturing Co. of Muhlenburg county, Ky., has filed articles of incorporation, its purpose being to mine coal and manufacture coke. Capital stock is placed at \$15,000. Harry Morton and Horace Mason of Greenville, Ky., and Geo. A. Steed of Summer, W. Va., are the incorporators.

The Dietz Colliery Co. of Old Gauley, Fayette county, West Virginia, has been chartered to conduct a general mining business; capital \$250,000; subscribed and paid in, \$5000. The incorporators are C.

M. Guggenheimer, John H. Lewis, James E. Edmunds, John D. Horsley and John T. Carter, all of Lynchburg.

Territorial charter has been granted to the Eclipse Mining Co. of Weatherford, O. T., for twenty years, with \$250,000 capital. The incorporators are J. J. Williams and C. A. Milliken of Weatherford, C. E. Haggard of Oreana, T. J. Hawkins of Asheville, N. C.; C. F. Fuller of Friendship, N. Y., and Geo. E. Fuller of Chicago, Ill.

Queen Bee Mining & Milling Co. of Gillham, Ark., has filed articles of incorporation stating its capital stock to be \$800,000, with \$500,000 subscribed. The officers are J. H. Rice, president; W. H. Rice, vice-president, and A. F. Easterday, secretary-treasurer. Mining and milling will be engaged in, but details have not been announced.

Articles incorporating the Auburn Coal Co., Clowersport, Ky., have been filed. The capital stock is \$50,000. The business is to mine coal and clay, make coke and handle by-products. The incorporators and their holdings are Atilla Cox of Louisville, 494 shares; J. Spratt Bridges, three shares; Richard N. Hudson, Clowersport, three shares.

Chicago capitalists have formed the Ozark Mining Co., with capital stock of \$5,000,000, to develop several lead and zinc mines in Webster county, near Niangua, Mo. Operations will be first begun at the famous Tunnell mines, from which considerable paying mineral has been previously obtained. J. J. Redmond represents the company at Niangua.

Articles of incorporation have been filed for the Chanute Mineral & Lumber Co. of Yellville, Ark., for the purpose of dealing in mineral and timber land and operating mines, but the character of the output has not been stated. The capital stock is \$20,000, of which amount \$8000 is said to be subscribed. I. D. Bashart is president; C. F. Prange, vice-president, and R. R. Reynolds, secretary-treasurer.

Parties owning 640 acres of valuable timber and iron mines located near Rileyville, Va., will begin development at once. Messrs. Geo. F. Huff and Henry F. Senator of Greensburg, Pa.; J. W. Whelpley, J. R. Wellington and H. S. Reeside, each of Washington, D. C., are interested. They will operate as the Bonanza Iron Co., H. S. Reeside, secretary, with offices at 1405 G street N. W., Washington, D. C. The ore is said to be brown hematite, running between 45 and 50 per cent. in iron.

Charter has been granted at Bristol, Va., to the Cranes Nest Company, with an authorized capital of \$10,000,000, for developing coal lands, and probably iron lands also, in Southwest Virginia. It is stated that the company is closely allied with the South & West Railroad, proposed to be constructed as a trunk line from the Great Lakes through Virginia and West Virginia coal fields to the Carolina coast. G. L. Carter is president; J. N. Powell, vice-president, and T. F. Davis, secretary-treasurer.

Frog Mountain Ore Co. of Cedartown, Ga., is preparing to develop the Frog Mountain ore banks, four and one-half miles from Spring Garden, Ala. A railway will be at once constructed to the property, grading for same (to be completed within thirty days) having been awarded to the Alabama Construction Co. of Anniston, Ala. The mines will be equipped with two washers, necessary pumping station and other modern machinery to facilitate operations. Part of the machinery has been purchased, but the boilers and engines are wanted. M. O. Guiss, treasurer, is located at Cedartown, Ga.

MECHANICAL.

Concrete Construction.

Because of its association, in the minds of a great many people, with objection-

wearing qualities or the tensile strength of concrete made from rock.

The wonderful wearing qualities of concrete have been demonstrated. Buildings are standing today intact, showing no effects of the ravages of time, built

Municipal buildings, schools, factories and mills are especially adapted to this material.

A recent fire test in the Pacific Coast Borax Co.'s factory was almost marvelous in its results. Steel girders and beams were

The accompanying illustrations are reproduced by its courtesy and permission, and illustrate its construction and its work.

Two New Machines.

The Q & C Company, Western Union Building, Chicago, recently placed on the market a line of metal-cutting machines embodying many novel features and improvements over those made by them in the past. One of these machines is here illustrated.

These are of two distinct types—one, the "Bryant" saw, in which the saw blade is driven by a gear or sprocket wheel engaging with the teeth, formed on the periphery of the blade, and the other an arbor-driven saw, in which the blade is driven by a central mandrel or arbor.

Both types are made in two styles—cut-off saws and universal saws. In the cut-off type the blade travel is short, and the machine is especially designed for cutting off bars, round and square, structural shapes, etc. In the universal type the travel of the blade is longer and the machine is fitted with an upper side-table on which the work can be cut off for the entire length of the travel of the saw blade, while they are also arranged with V blocks and lower tables for cutting bars and shapes.

The accompanying illustrations show two views of a Bryant cut-off machine, one belt-driven and the other motor-driven. Any machine can, when desired,



FIG. 1—CONCRETE BUILDING AFTER FIRE.

able forms of building materials and methods of building, the use of concrete in structural work, its advantages in particular, have never been fully realized.

Concrete may be defined as a mass of particles of rock or similar material united by means of lime or cement.

Plain concrete has far less tensile than compressive strength, and how to unite with it some material possessing more tensile strength in such a way as not to cause unequal stretching or bending under varying loads has always been the problem. Bars of plain iron have never been satisfactory, for the reason that these pull out, stretch, bend or break.

Ernest L. Ransome, for years a resident of California, solved the difficulty. By cold twisting iron he increased its tensile strength and facilitated its adhesion and close union with the concrete, in which it is entirely embedded, thus forming a continuous bond with it. This is known as the "Ransome" system of concrete construction, and has proved a wonderfully effective and successful one.

The comparative cheapness of this method of construction is another of its advantages, and another with which few people are familiar. It is less expensive than brick. Any substance almost on which a structure is erected may be used as a basis for the concrete of which it is to be built. If the wall is built on a rock foundation, the rock excavated is crushed and worked into the best form of concrete. Gravel, sand, clay or practi-

hundreds of years ago. The concrete parts of Roman ruins are not ruins at all, and stand today as when fashioned by

reduced to scrap iron, copper fused, iron welded to iron, and immense masses of steel were precipitated from the top of

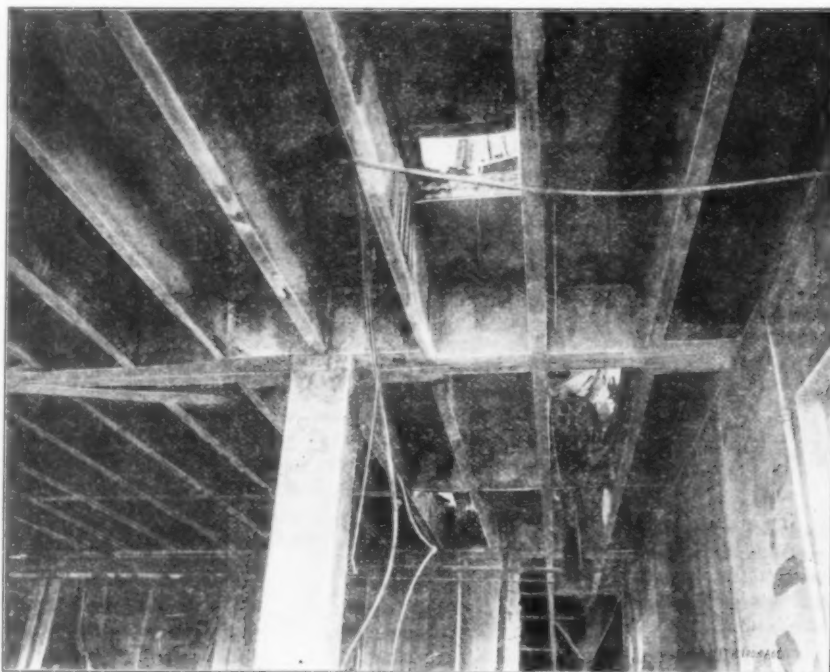


FIG. 2—SHOWING SLIGHT EFFECTS OF FIRE ON CONCRETE CONSTRUCTION.

the hands of their makers. Cheaper than stone, more lasting, as ornamental, allow-

the structure to the thin concrete flooring below; the building, the concrete part of it, stands practically intact, and can be rebuilt entirely with an expenditure of \$1000 to replace combustible material destroyed.

Concrete and glass is becoming the recognized building combination for factories, concrete and steel is becoming the recognized paving material, and with the rapidly-diminishing extent of our forest lands and the demonstrated superiority of concrete for a vast majority of building purposes, its universal adoption is in sight.

With this in view it is not to be wondered at that the Ransome & Smith Co., 11 Broadway, New York, which has done such great work with this ancient, and yet, as it applies it, modern building material, should be prospering. This construction, use and application of concrete and twisted iron is a good one, and beyond doubt correct.

be mounted on a circular base, which can be completely rotated by rack and pinion, this being a very desirable feature where there is not sufficient room for swinging a long beam. Lateral adjustment of side tables can be furnished, if required, so that work can be adjusted for cutting after being secured.

Special attention has been given to the arrangement of the tables on all machines, in order that work may be placed most advantageously for cutting with a minimum distance of blade travel. The lower side-tables are of sufficient length to enable beams, etc., to be properly supported when being cut off at any angle up to 45 degrees, and to permit of steel castings within the capacity of the machine being secured to it.

All machines are fitted with the Q & C Company's latest type of friction feed, giving an automatic feed, variable with the machine in motion from one-quarter inch



FIG. 3—TWISTED IRON USED IN CONCRETE CONSTRUCTION.

cally any soil can be used as well, although, of course, concrete made of such materials cannot be expected to have the

ing speed of construction which no other building material permits, it has found and is finding wide and extensive use.

to one inch per minute on the Bryant saw, and from three-sixteenths to thirteen-sixteenths inch per minute on the arbor-driven saws. The feed is powerful in its action, and gives a constant driving force throughout its entire range. The feed nut is solid, six inches in length and

been made not only for the factories that are to be erected there, but also for homes and all modern improvements and comforts for the men who are to work in the factories. The latter will be located on a fairly level area between the Pennsylvania Railroad and the residence portion

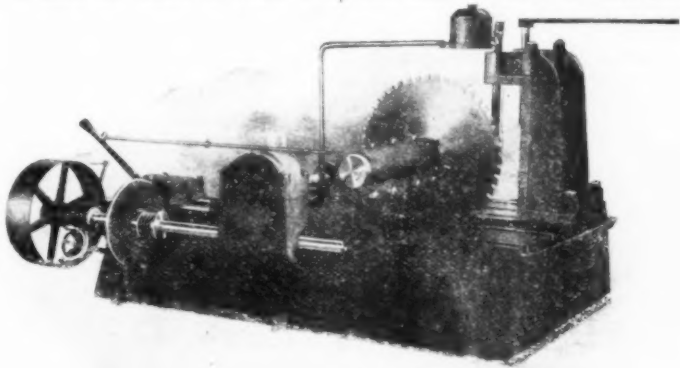


FIG. 1.

bushed with bronze. It is bolted and tongued to the carriage, and can be readily removed without dismantling the machine.

All gears in both types of machines are entirely enclosed, avoiding dust and the wear it entails when machines are not advantageously placed. The shears and tables are of strong and rigid design, and are provided with oil troughs, so that all lubricant is returned to the central trough underneath the saw blade.

The Q & C Company, being the only manufacturer of both these types of machines, is consequently in position to furnish to its customers that type of machine which experience has shown to be the best adapted to accomplish the required work with the greatest possible economy.

Trafford City, Pa.

The remarkable growth of the affiliated Westinghouse industries was recently signalized by the building of a new city and the erection of another Westinghouse manufacturing plant. The new industrial center is located about seventeen miles east of Pittsburgh on the Pennsylvania Railroad, and is to be known as Trafford City. Extensive factory sites have been laid out here to provide for the overflow of the several Westinghouse industries, a number of which have already used up all the available building room at their present locations, and are still pressed for space. The first of the Westinghouse companies to erect buildings in the new city is the Westinghouse Foundry Co., which is at present putting up the extensive and model foundry plant and pattern shop described in this article. This addition is necessitated by the rapidly-increasing business of the West-

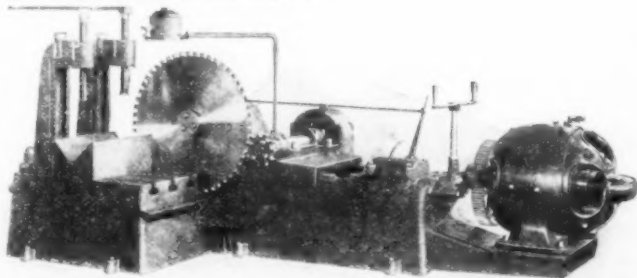


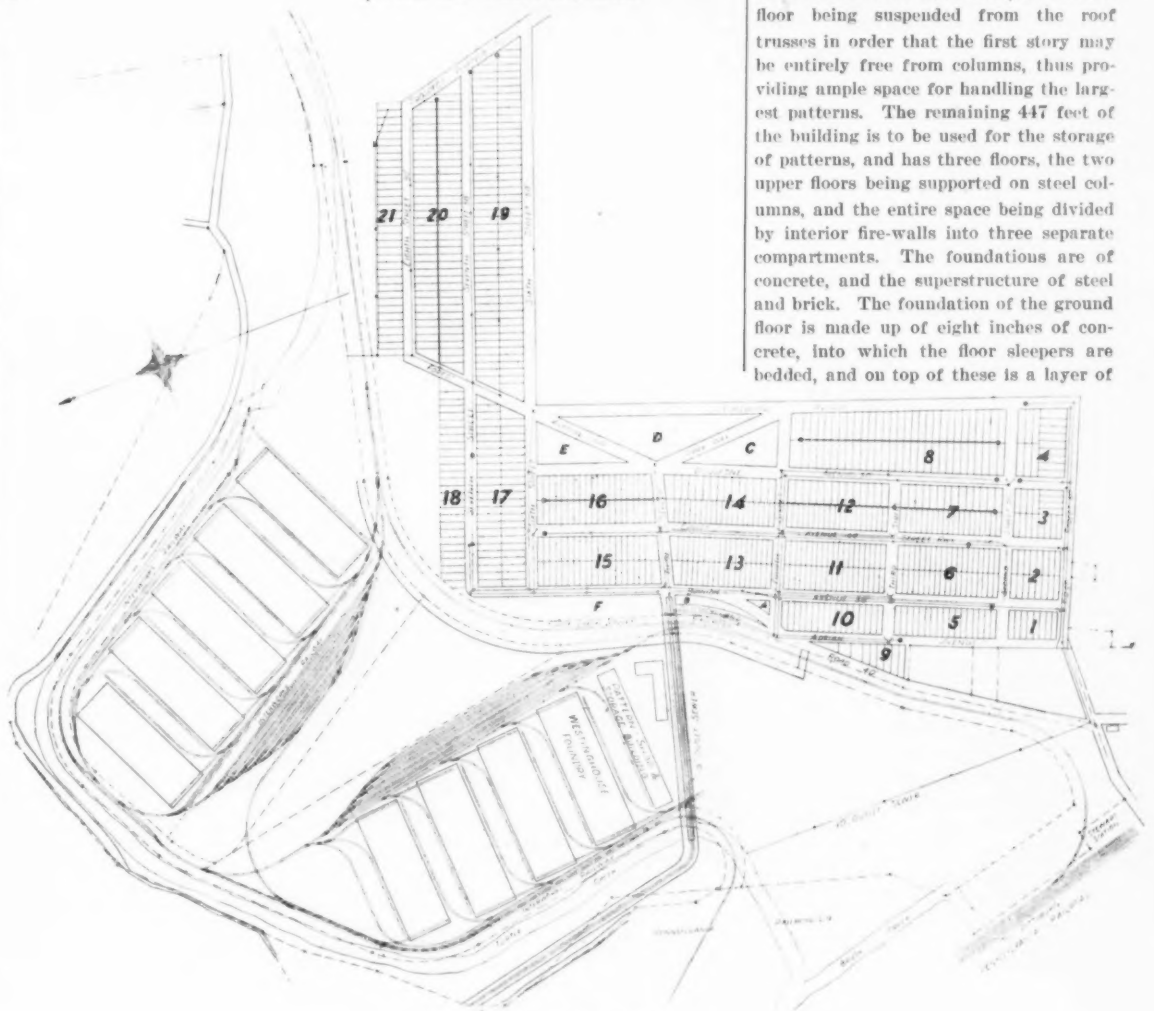
FIG. 2.

inghouse Machine Co., especially in connection with very large steam and gas engines and steam turbines. Before taking up the foundry itself, a short account will be given of Trafford City.

In laying out this city provision has

of the city, which will be reached from the railway station by a steel viaduct 1100 feet long. The residence district has been laid out upon hillsides and a generally level plateau, high enough above the factory sites to render it free

from smoke and dirt. The city consists of two oblong areas, one of which is about one-half mile by one-fifth mile, and the other one-half mile by one-seventh mile, the two areas meeting in such a way as to form a reversed letter "L," the corner of which is the most northerly part. The town has been laid off into about 800 building lots, each with an average frontage of about 30 feet and a depth of 100 feet. In addition to this, space has been left for six parks. The entire town has been provided with water-works and sewerage systems, the latter including separate storm water and sanitary sewers. This work, as well as the paving of the streets, was completed before the city was thrown open to settlement. The latter event, which took place on June 7, 1902, recalled in many ways the famous booms of the Far West. Many of the intending purchasers of the lots came to the site of the future city a day before the sale was to commence and "squatted" on the ground which they wished to possess.



MAP OF TRAFFORD CITY, PA.

The new town is connected with Pittsburgh by the Pennsylvania Railroad, over which there are forty-six local passenger trains going each way daily, and reaching the center of the city in from twenty-five to thirty-five minutes. In addition, a street-railway line has been built, connecting with the Pittsburgh Railway Co.'s line at Wilmerding, two and one-half miles distant. This street railway passes over the steel viaduct into Trafford City and forms a loop through the principal streets.

The factory site, located in a bend of Turtle creek, provides room for nine factory buildings, each about 200x800 feet. A system of railway yards and tracks serving this area has been laid out in a very thorough manner, providing a track alongside of each building and transversely through each end. The storage

tracks in connection with this occupy an area of about 300x200 feet. This system of tracks is connected with the main line of the Pennsylvania Railroad by the Turtle Creek valley branch of the latter. It is also to be connected with the towns of Wilmerding and East Pittsburgh, where the works of the Westinghouse Air Brake Co., the Westinghouse Electric & Manufacturing Co. and the Westinghouse Machine Co. are located, by the Interworks Railway, which will be operated by the Westinghouse interests.

The new foundry and pattern shop of the Westinghouse Foundry Co., which, as stated above, are being erected, are located at the extreme southern portion of the factory site and near the steel viaduct. The pattern shop and storage building, which has already progressed well towards completion, is a steel and brick structure 605 feet long and 80 feet wide, with a height to the eaves of the roof of 47 feet. The pattern shop occupies 160 feet at one end of this building. It is divided into two floors, the second floor being suspended from the roof trusses in order that the first story may be entirely free from columns, thus providing ample space for handling the largest patterns. The remaining 447 feet of the building is to be used for the storage of patterns, and has three floors, the two upper floors being supported on steel columns, and the entire space being divided by interior fire-walls into three separate compartments. The foundations are of concrete, and the superstructure of steel and brick. The foundation of the ground floor is made up of eight inches of concrete, into which the floor sleepers are bedded, and on top of these is a layer of

two-inch maple flooring. The upper floors in both the pattern shop and storage building are supported on steel beams and steel girders, and are made up of three-inch yellow-pine flooring, covered by one thickness of maple flooring. The roof joists are steel I-beams spaced eight feet center to center and covered with three-inch roof sheeting, which is covered with slate.

The foundry building is 611 feet 8 inches long and 184 feet 3 inches wide outside of the brick walls, which are 36 feet high at the eaves and 80 feet at the peak. As in the case of the pattern shop, the foundations are built of concrete and the superstructure of steel and brick. The foundry is divided transversely into three bays, the center bay being 80 feet 3 inches wide between centers of columns, runways being provided for traveling cranes

of 80 feet span and 150 tons lifting capacity. The cranes will be electrically driven. The two side bays are each 50 feet 6 inches wide from center to center of columns, and are provided with runways for traveling cranes of 47 feet 2½ inches span and 50 tons lifting capacity. At one side of the foundry building runways are provided for yard traveling cranes of 100 feet span and a lifting capacity of 75 tons. The I-beam purlins are spaced eight feet center to center, and are covered with three-inch yellow-pine roof sheeting. The roof is covered with slate.

At the middle of one of the side bays, where the cupolas are located, is a charging floor about 50 feet square, constructed entirely of steel. The melting equipment of the foundry will consist of two air furnaces, each having a capacity of 30 tons, and three cupolas capable of melting 18 tons per hour each. This will enable a casting weighing as much as 100 tons to be easily poured, and the casting can afterwards be lifted out of the sand by one of the 150-ton traveling cranes. The air furnaces will be employed for the largest and most important castings, owing to the fact that they yield a superior quality of iron, and the cupolas will be employed for the ordinary classes of castings, and particularly small castings. The building will contain every modern convenience known to the art, making possible the easy and economical handling of all materials, and it is expected to produce such castings as those required for the largest size of steam engines now in existence, with provision for possible increase in sizes for the future. Both buildings will be provided with automatic sprinklers for fire protection.

The buildings will be equipped throughout with modern lavatories and conveniences for the comfort of workmen, and will be in every respect up-to-date. They will be heated by hot air, the foundry, pattern shop and pattern-storage rooms to have minimum temperature of 50, 60 and 35 degrees Fahrenheit, respectively, in zero weather. Artificial light will be furnished by both arc and incandescent lamps. In order to insure plenty of light during the day the windows are large, and both the foundry building and pattern shop are provided with skylights of large area. The plans for the buildings were prepared under the supervision of the Westinghouse Machine Co. The Security Investment Co. of Pittsburg, Pa., is the financial agent and general contractor for the entire works, and Messrs. James Stewart & Co. of St. Louis, Mo., and Pittsburg, Pa., are the managers of construction. The Real Estate Trust Co. of Pittsburg, Pa., successfully handled the extensive sale of city lots adjoining the new works.

Arrangements are being made by the Pennsylvania Railroad, the Southern Railway and the Louisville & Nashville Railroad to shortly put in service a faster mail train from New York to New Orleans. It will leave New York at 2.15 A. M., Washington at 8 A. M., Atlanta 11.30 P. M., Montgomery at 3.30 A. M. (on the second day), and will arrive at New Orleans at 11.30 A. M.

It is announced that Henry Bayer, Son & Co., fruit importers of Charleston, will establish a line of ships and make Galveston a distributing point for Texas and the West of fruit from Jamaica, Porto Rico and other West Indian Islands.

The Mexican government has granted concessions for the establishment of a Yucatan steamship line to ply between Progreso, Yucatan and New York, with the privilege of calling at Vera Cruz, Tampico, Galveston, New Orleans and Mobile.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., October 1.

The tone of the local phosphate market is better, in sympathy with the improvement in other fertilizer ingredients. There has been, however, very few sales reported in the local market. The tone of trade at producing points in the Southern phosphate fields is improving materially, and from the charters closed during the past week the indications for heavier shipments are good. The following phosphate charters were reported: British steamer Frieda, 1335 tons, from Port Royal to Tyne at or about 10/9 September; schooner Medford, 1160 tons, from Port Tampa to Baltimore at or about \$2; British steamer Buckminster, 1297 tons, from Fernandina to United Kingdom or Continent on private terms; schooner L. Herbert Taft, 1294 tons, from Port Tampa to Baltimore at or about \$2, and schooner J. E. Drake, 780 tons, from Port Royal to Baltimore at \$2. The movement among miners in Coosaw river and other mining sections of South Carolina is more pronounced, and there is said to be considerable valuable territory yet undeveloped. The demand for Carolina rock is improving, and both domestic and foreign shipments are better. In the Florida field operations are being carried on more extensively in several sections, and the output distributed for the past commercial year will reach over 800,000 tons. The shipments for September from the ports have been heavier than usual. The first ship to clear from Port Inglis, the new west coast phosphate port, sailed last week with a full cargo of rock from the Dunnellon Phosphate Co. The tone of the market for pebble rock is firm, with a good inquiry, and for land rock there is a steady inquiry. The phosphate situation in Tennessee is at the moment showing very favorable features, and the development of new territory is attracting miners, several valuable sections being under consideration. The tone of prices for both domestic and foreign rock at Mt. Pleasant is very steady.

Fertilizer Ingredients.

The ammoniate market during the month of September ruled firm, with an advancing tendency. During the past week the market has been active, with a good demand from Eastern sources. There is also a better demand from the South. In the West stocks of blood and tankage are firmly held at current quotations.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$3 00	@ 3 02½
Nitrate of soda, spot Balto....	2 05	@ 2 10
Blood	2 50	@ 2 52½
Azotine (beef).....	2 45	@ 2 50
Azotine (pork).....	2 45	@ 2 50
Tankage (concentrated).....	2 35	@ 2 40
Tankage (5 and 20).....	2 47½	@ 2 50 & 10
Tankage (7 and 30).....	21 00	@ 21 50
Fish (dry).....	27 50	@ 30 00

Phosphate and Fertilizer Notes.

The steamer Wyneric was loading at Fernandina, Fla., last week for a European port, and took out, among other cargo, 3300 tons of phosphate rock.

Mr. Joseph A. Chapin has secured the right of way for a railroad from Ashwood, Tenn., to the farms of Alan Harlan and Pillow Gant, a distance of four miles. This road will open up an extensive territory of high-grade phosphate about eight miles west of Columbia, Tenn.

Mr. R. E. Callahan, representing the Martin Chemical Co. of Quincy, Ill., visited Dallas, Texas, last week to select a site in that city for the establishment of a chemical plant. The company has already shipped plant to Dallas, and work upon the erection of a suitable building will be commenced at once.

The 6000-ton Dutch steamship Themiste cleared from Port Inglis, which is Florida's new west coast port, on the 25th ult., with a cargo of phosphate rock for Hamburg. This is the first ship to clear from Port Inglis. The vessel was loaded by the Dunnellon Phosphate Co.

The exports of Florida phosphate rock from Savannah, Ga., have been unusually heavy during September, and indications for October promise a continuance of large shipments to Europe. The steamer Hohenfels cleared last week for Bremen and Hamburg with 2508 tons of high-grade Florida phosphate rock for the latter port, and the steamer Huelya for Bremen with 2288 tons. The Celtic Princess cleared for Hamburg with an assorted cargo, among which was 1400 tons of phosphate rock taken at Fernandina.

Major E. Willis in the Charleston News & Courier, reviewing the phosphate industry for the commercial year ending August 31, says: "The amount of phosphate rock needed to supply the world's demand for the year 1902 will be at least 3,000,000 tons. * * * Europe needs at least 2,000,000 tons, which is supplied about as follows: From Russia and Norway, 60,000 tons; Belgium, 300,000 tons; France, 500,000 tons; Africa, 450,000 tons; South Carolina, 80,000 tons; Tennessee, 75,000 tons; Florida, 525,000 tons—a total of 1,990,000 tons; consumed in America 1,250,000 tons, a grand total of 3,240,000 tons."

It is stated that Messrs. Hallgarten & Co. and Blair & Co. of New York have purchased \$7,000,000 in Virginia-Carolina Chemical Co. collateral trust 10-year 5 per cent. redeemable sinking fund gold bonds. These bonds have been issued in accordance with the purpose of the company, as expressed in its annual report and approved at the annual meeting of the stockholders, to reimburse the company for expenditures on new plants and improvements. The sinking fund amounts to \$500,000 a year, the first payment beginning October 1, 1904. This is the only bond on the property, and is secured by a deposit of the company's holdings of the Southern Cotton Oil Co. and the Charleston Mining Co. The income from the former company alone amounted last year to \$1,800,000.

Cottonseed-Oil Notes.

The Eufala Cotton Oil Co. of Chattanooga, Tenn., has filed an amendment to its charter, increasing its capital stock from \$50,000 to \$75,000.

The recent cottonseed war at Athens, Ala., has partially closed, and oil mills have gotten together and now pay a uniform price of twenty-five cents per bushel for seed. Cottonseed at Athens has sold this season as high as thirty-five cents per bushel.

The price of cottonseed in Memphis on the 23d ult. was \$20 per ton. Receipts on the 22d ult. were very heavy, 321 cars having been received since the 1st of September, while last year on the same date only fifty-seven cars had been received. On the 27th ult. seed was officially quoted at \$18 per ton, with continued heavy receipts by rail and river.

The cottonseed-oil mill men of Alabama met last week in Birmingham, Ala., for the purpose, as stated, to make an agreement as to prices to be paid for seed, and other conditions of the trade. It is said that 125 mills were represented at the meeting either in person or by proxy, and the proceedings of the meeting were kept private. The situation, however, was fully discussed, and the outlook for a good crushing season was said to be very encouraging.

It was reported in Memphis last week that the Valley Oil Mills of that city had announced that it would extend its territory in the State of Arkansas. That part of the country along the Choctaw, Oklahoma & Gulf Railroad, which has heretofore sent the greater part of its cottonseed to Arkansas mills, will be invaded by the Memphis concern. The Valley Oil Mills will make a decided bid for the seed coming from that territory along the Choctaw line and get as much as possible for the Memphis market.

Two charters were granted last week at Jackson, Miss., the aggregate capital stock of which was \$450,000. One was for a charter of the Refuge Cotton Oil Co. of Vicksburg, capitalized at \$400,000, with William A. Montgomery, W. N. King and E. M. Durham, incorporators. The other was for the Issaquena Planting & Development Co. of Myersville, Issaquena county, Mississippi, with a capital stock of \$250,000. The incorporators are J. H. Levy, L. L. Schurer, Charles McInnis, Adolph Hirsch and M. D. Landau.

Ground was broken last week for the construction of the new oil refinery at Gretna, opposite New Orleans. The foundation of the buildings is to be made of heavy piling. The wharf will extend out into the river from the buildings until a depth of thirty feet of water is reached, which will allow vessels to land and receive their cargoes. The refinery proper will be built near the Texas & Pacific tracks. The plant is owned by the Seaboard Refinery Co., of which A. P. Saur is president, and Ernest T. George, vice-president. The company will spend upon its plant upwards of \$125,000.

The following are official quotations on cottonseed and cottonseed products, as posted at the Cotton Exchange in New Orleans on the 29th ult.: Prime refined oil in barrels, 36 cents per gallon; off refined oil in barrels, 35 cents per gallon; prime crude, loose, 29 to 29½ cents per gallon; off crude, loose, nominal per gallon; prime cottonseed cake, \$26.50 per ton of 2240 pounds; off prime cottonseed cake, nominal; prime cottonseed meal, \$25.50 per ton of 2240 pounds; off prime cottonseed meal, nominal; soap stock, \$1.20; linters, per pound—A, 3½ cents; B, 3¼ cents; C, 3 cents; cottonseed in sacks delivered in New Orleans, \$17 per ton of 2000 pounds; in bulk delivered in New Orleans, \$16 per ton of 2000 pounds.

The Southern Railway, through Mr. M. V. Richards of its land and industrial department, is making at the fall festival at Cincinnati an extensive exhibit of Southern products similar to the one being made at Boston. The exhibit occupies 2000 square feet of floor space, and includes specimens of the products of Southern fields, farms, forests and mines. These exhibits are but one of the means employed by the land and industrial department of the Southern Railway in attracting settlers and capital to the South.

The Mandeville Mills of Carrollton, Ga., has been incorporated, with capital stock of \$212,000, and privilege of increasing to \$400,000. This corporation consolidates the Mandeville Cotton Mills, Carrollton Cotton Oil Mills and Free State Fertilizer Works, capitalized, respectively, at \$100,000, \$45,000 and \$25,000. It was planned to consolidate these enterprises several months ago.

The Atlanta Manufacturers' Association has been organized with J. P. Stevens, president; Joseph Hirsch, vice-president, and W. G. Cooper, secretary-treasurer. The exhibit by the association will open on October 8, and will practically fill the agricultural building at the Atlanta fair grounds.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., October 1.

Conditions prevailing in the local lumber market have undergone but little change during the past week; the inclement weather, however, has restricted the handling and shipping of lumber. The demand is regular, but not of any unusual volume, and the list of values throughout may be written steady to firm for desirable grades. In North Carolina pine the movement is a good average, and for box grades prices, which have shown a slight decline, are now about steady, with a better inquiry. White pine is in limited demand, and holders are generally firm in their views, and are not willing to grant concessions. There is a fair inquiry for cypress, but values are easy, with stocks ample for all requirements. Poplar is about steady, with no urgent demand, and prices are somewhat affected by the depression at European ports. In hardwoods there is no decided change, and for all desirable seasoned stock there is a fair inquiry from out-of-town buyers. As to the export demand, the situation remains unchanged in the European market, and the consequent movement in local circles is light.

Norfolk.

[From our own Correspondent.]
Norfolk, Va., September 29.

Weather conditions have during the past few days retarded operations in the various channels of the lumber trade of this section. The market, however, continues to show a very steady tone, and is surrounded with features indicating a substantial trade during the balance of the present year. The North Carolina pine market is showing excellent form, and the output is kept well in hand, there being but slight accumulation at any milling point. Orders are coming in regularly, and mills have all the business they require at the moment. The North Carolina Pine Association will hold a meeting in this city on October 2, when the various phases of the industry will be discussed. Reports of the operations of the North Carolina pine mills will be submitted, but it is not expected that any change will be made in the price-list. The hardwood lumber industry is now in better shape, and the volume of business for September shows more expansion in certain lines. Box factories and other woodworking concerns are enjoying a fair share of activity, having a good demand for all their output. Planing mills have been unusually busy during September, and dressed lumber is firm, with a hardening tendency.

Savannah.

[From our own Correspondent.]
Savannah, Ga., September 29.

The lumber market here has been rather unsettled during the present month, and consumers and manufacturers have been apart in their views as to prices. There has been a good average movement at this port, and in coastwise as well as foreign channels considerable business has been transacted. Since the close of the commercial year on August 31 about 13,000,000 feet of lumber has left the port, and there are now under charter a number of sail vessels to load lumber here in early October. At the various milling points in the interior there is a good supply of lumber on hand, and generally sufficient for all present wants, while mills are fairly

well supplied with orders. There is to be a meeting of the Georgia Saw-Mill Association at Valdosta tomorrow, when various matters relating to the industry will be discussed. At Brunswick the arrivals of vessels during the week have been heavy, and indications point to considerable activity during the month of October. Freight rates on lumber are firm, and recent charters are as follows: Schooner Flora Rogers, 357 tons, from Savannah to New York with lumber at \$6; schooner H. B. Peck, same on private terms; schooner C. F. Bronson, 952 tons, from Brunswick to New York with ties at 15 cents, and schooner Blanche H. King, 1022 tons, from Brunswick to New York with ties on private terms. A number of schooners have been loaded and waiting to proceed from Savannah for ten days, but were delayed on account of unfavorable winds.

Mobile.

[From our own Correspondent.]
Mobile, Ala., September 29.

The sawn timber market continues decidedly firm and advancing, and sales reported during the past week were made on the basis of 17½ cents per cubic foot. Mills at Brewton and other points are now turning their attention to the manufacture of export stuff, as prices are generally firm and higher. Hewn timber is firm at 16½ to 17 cents per cubic foot, with stocks very light. Hewn oak is quoted 18 to 20 cents per cubic foot, and poplar is in good demand at 14 to 15 cents per cubic foot. The lumber trade is active, with the demand more decided than a week ago. Primes are firm, and kiln-dried saps are scarce, stocks having all been absorbed by dealers at or about \$13. The demand from interior markets is brisk, and exporters find it difficult to get their orders filled promptly. Orders from Mexico are more numerous, but trade with Cuba is quiet at the moment. There is considerable improvement in the River Platte market, and there are schedules offering amounting to about 3,000,000 feet. During the past week the shipments of lumber amounted to 113,625 feet, and of sawn timber 175,575 cubic feet and hewn 5600 feet. At Pensacola the movement last week in timber and lumber was very heavy. The rivers still continue low, and arrivals of timber have been very light. It is stated that C. W. Hagerman is to be local manager of the new line of steamers to ply regularly between Pensacola and South African ports. It is understood that lumber and timber will be the principal cargoes, though cattle will be a large item. The Vermont, a steamer of this line, is under charter for this month to take a cargo of timber and lumber to South Africa. The steamer Glendyon was taken last week to load lumber at a Gulf port for Buenos Ayres at \$13, \$2 form, and British bark Rollo, 875 tons, from Pensacola to Pernambuco with lumber on private terms.

Lumber Notes.

Mr. Charles A. Campbell of Dickson, Tenn., has decided to establish a stave mill at that place, and ground for the plant has already been secured.

It is stated that Mr. C. B. Jordan of Salisbury, N. C., is organizing a stock company for the purpose of erecting a \$50,000 furniture factory at Asheville, N. C.

The Stetson Lumber Co. of Macon, Ga., has been chartered, with a capital of \$3000. The firm is composed of J. P. Stetson, E. W. Stetson and J. M. Mathews.

A valuable tract of cedar timber consisting of 300 acres was sold last week by Galloway Bros. of Silver Creek, near Lewisburg, Tenn., to Scott & Hutton of

Shelbyville, for which they received \$40,000.

The Wynne Stave Co. of Little Rock has filed an amendment to its articles of incorporation, increasing its capital stock from \$5000 to \$10,000. Mr. Isaac Bloch is president of the company.

Th Sawyer & Austin Lumber Co. of Pine Bluff, Ark., has let the contract for the erection of brick addition to accommodate sash, door and box equipments. About \$20,000 will be expended.

The Hand Lumber Co. of Dolive, Ala., has recently installed an electric-light plant at its saw-mills with a view to doubling its force and running day and night. The company's annual shipments are now more than 20,000,000 feet.

The Chanute Mineral & Lumber Co. of Yellville, Ark., has been chartered, with a capital stock of \$20,000, of which \$8000 has been subscribed. The officers of the company are: L. D. Baschert, president; C. F. Prange, vice-president; R. R. Reynolds, secretary and treasurer.

The organization of the American Lumber Co. has been perfected in Chicago, Ill., in all its details. The concern is bonded for \$600,000, and has a capital stock of \$8,000,000. It owns 29,262,503 acres of timber land in New Mexico. The officers and directors are all Chicago and Michigan men.

Mr. R. A. Long of the Bryan-Long Lumber Co. of Bristol, Va., has sold his interest to J. H. Mongle. The firm name will now be the Bryan-Mongle Lumber Co. The Blue Ridge Lumber Co. of New York has opened an office in Bristol, with Mr. E. L. De Camp in charge for the company.

The Moline Mill & Brick Co. of Moline, Fla., have under construction a saw-mill 180 feet in length, and a planing mill nearly as large will soon be built. The mill is surrounded by some of the finest timber land in the State. Large quantities of logs have been placed in the boom awaiting the starting of the mills.

It is stated that a Baltimore firm has secured a trainload of valuable walnut timber from the vicinity of El Reno and Bridgeport, Okla., for shipment direct to German dealers and manufacturers. This is the first shipment of any consequence to be sent from Oklahoma, although the southwestern portion of the territory is very rich in walnut.

The Cherokee Logging Co. of Gadsden, Ala., has been incorporated, with an authorized capital stock of \$1000. The company will engage in the manufacture of lumber, a general logging business, construction of tramroads and building of boats and barges to navigate the Coosa river. T. S. Kyle is president of the company, and Joseph Balfone, secretary and treasurer.

The Jones Bros. of Prestonsburg, Ky., have a \$40,000 logging contract with a Cincinnati firm, and are now building four miles of tramway into the mountains of Beaver creek, over which to transport the logs to floating water, where they can be rafted. About 100 hands are at work. Several other companies have contracts in that region. There is considerable fine walnut yet to be found.

The Atlantic & South African Steamship Co., Limited, controlled by the Lingam Timber & Trading Co., Limited, of London, England, and represented by the Hagerman-Lazier Trading Co. of Pensacola, has chartered the steamer Vermont for regular sailings between Pensacola and South African ports. The company is also having built for service on this new line two new 3000-ton steamers, to be named the Rosewood and Pinewood.

The largest walnut log ever grown in Eastern Kentucky was floated out of Beaver creek last April and floated down the Big Sandy to the Cincinnati market, where it brought over \$8000. It was a finely curled tree thirteen feet in circumference and over 120 feet long. It cost about \$1000 to get it to market. This tree was known by all as the mammoth walnut of Floyd county.

A certificate of the payment in full of the capital stock of the Horstmeier Lumber Co., incorporated July 1 last, was filed for record last week in Baltimore. The capital stock is \$36,000, divided into 360 shares of \$100 each. There was paid in cash \$19,881.92, and in lumber, horses, etc., \$1700.08. The certificate is signed by John T. Galvin, John R. Jorss, Bernard J. Barrett, Beauregard Dobson and James P. Leland, directors of the company.

Mr. J. C. Seale of Greenville, Ala., visited Mobile last week on business connected with the removal of the plant of the Gulf Red Cedar Co. from Greenville to Mobile. The building for the factory has been completed and the machinery placed. The plant will be finished and the removal completed about the 1st of November. This company is engaged in the exclusive cutting of red cedar into pencil stock for shipment to New York and foreign countries.

It is reported that the Consolidated Naval Stores Co. will be incorporated in Jacksonville this week, with a capital of \$2,000,000. The concern is taking in the Southern Naval Stores Co. of Savannah, the Ellis Young Company of Savannah, the Downing Company of Brunswick, the Mutual Naval Stores Co. of Jacksonville, the Gulf Naval Stores Co. of Tampa, the Florida Naval Stores Co. of Jacksonville and the West Coast Naval Stores Co. of Pensacola. The company will handle the output of 500 producers in Georgia, Florida and Mississippi, and is expected to do an annual business of \$11,000,000.

The Retail Lumber Dealers' Association of Mississippi met in convention at Greenville, Miss., on the 23d ult. The meeting was called to order by President B. A. Tucker of Senatobia. The members, after being registered, proceeded to business. President Tucker delivered his annual address, which contained many valuable suggestions relating to the industry and to the members of the association. The report of Secretary and Treasurer W. G. Harlow of Yazoo City was received and adopted. R. T. Gayden of Winona delivered an address on "Our Declaration of Principles," and J. L. Strickland of Greenville read an interesting address on "Hints on Lumber-Yard Management." After a general discussion of matters of interest to lumber dealers, the convention adjourned.

It is stated that Mr. William Schuette of the William Schuette Lumber Co. of Lansing and Saginaw, Mich., acting for his company, has purchased the plants of the Alleghany Lumber Co., the Pungo Lumber Co. and the Wades Point Lumber Co., said to be the largest three mills in North Carolina, at a price said to be about \$200,000. All these mills are located in Beaufort county, North Carolina. Mr. Schuette's plan heretofore has been to contract for the annual cut of a number of mills in the Norfolk section, taking the entire cut—mill run—at certain prices. Under the new deal the Schuette people will control outright a large amount of stumpage. It is believed that the Alleghany Lumber Co. held about 100,000 acres of North Carolina tidewater timber, and the holdings of the other companies will probably increase this amount to a large total.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Birmingham—Paint Works.—John C. Brain of Birmingham, Geo. W. Roland of New York, John H. Shipley of Baltimore, Jas. P. Murphy of Boston and others have incorporated Eureka Paint Co., with authorized capital of \$5,000,000, to manufacture paint from hot-blast furnace slag.

Birmingham—Glass Works.—The Commercial Club is negotiating for the establishment of a plant to be capitalized at \$100,000; it is understood to be a glass works.

Huntsville—Lime Works.—F. S. Shirley of Summittville, Tenn., is endeavoring to organize a \$10,000 company to establish lime works at Huntsville.

Huntsville—Sand-brick Works.—It is reported that Paul P. Tafel of Cleveland, Ohio, proposes establishing sand-brick works at Huntsville.

Huntsville—Electric-light Plant.—City council has cancelled contract with local company and intends to build an electric-light plant; proposed capacity to be 150 arc lamps and 1500 incandescent lamps. Address "City Clerk."

Oak Grove—Sugar Mill, etc.—It is contemplated to build a sugar-cane and starch mill, also cotton factory and saw-mill. H. Chance can give information.

Spring Garden—Iron Mines.—Frog Mountain Ore Co. (not Alabama-Georgia Iron Co., as mentioned first week) is developing iron-ore mines near Spring Garden. Contract for grading has been let to the Alabama Construction Co. of Anniston, Ala., and the mines will be equipped with two washers, pumping station, etc. M. O. Guiss of Cedar-town, Ga., is treasurer.*

Tallassee Falls—Water-power Electric Company.—Montgomery Water Power Co.'s electrical plant is about completed, and after operation for thirty days will be transferred by the construction companies. It is proposed to raise the dam ten feet in the near future, so as to increase from 4000 to 5000 horse-power.

ARKANSAS.

Eureka Springs—Stock Company.—Arkansas Angora Stock Co. has been incorporated, with capital stock of \$25,000, for raising Angora goats. Chas. L. Requa is president; E.

M. Bare, secretary, and E. J. West, treasurer.

Fort Smith—Packing and Cold Storage.—Arkansas Packing & Cold Storage Co. has been incorporated, with Thos. P. Edward, president; W. A. Hitesburger, vice-president, and Chas. Peters, secretary.

Fort Smith—Cold Storage, etc.—Incorporated: Arkansas Packing & Cold Storage Co., with capital stock \$150,000, of which \$75,000 shall be preferred; Thomas B. Edward, president; Wm. A. Hentzeburg, vice-president, and Chas. Peters, secretary.

Gillham—Mining and Milling.—Incorporated: Queen Bee Mining & Milling Co. has been incorporated, with capital stock of \$800,000; J. H. Rice, president; W. H. Rice, vice-president, and A. F. Easterday, secretary.

Little Rock—Stave Mill.—Wynne Stave Co. is increasing capital stock from \$5000 to \$10,000.

Luxora—Machine Shops.—St. Louis Southwestern Railway will build repair shops. F. H. Britton, St. Louis, Mo., is general manager.

Mena—Water-works.—City has named S. B. Robertson as engineer in charge of its proposed \$25,000 water-works mentioned last week. John H. Hamilton is secretary of commission.*

Pine Bluff—Sash and Door Factory.—Sawyer & Austin Lumber Co. has let contract to M. M. Bruce for erection of brick addition to accommodate sash, door and box equipment. About \$20,000 will be expended.

Yellville—Mining, etc.—Chanute Mineral & Lumber Co. has been incorporated, with capital stock of \$20,000, to deal in mineral and timber lands and operate mines; I. D. Baschert, president; C. F. Prange, vice-president, and R. R. Reynolds, secretary.

FLORIDA.

Bartow—Electric-light and Sewerage Plants.—City will hold election November 11 to vote on issuing \$15,000 in bonds to establish electric-light and sewerage plants and improve the streets. Address "The Mayor."

Daisy—Saw-mill.—Lucas & Barnes are reported as to build a large saw-mill.

Gainesville—Wood by-product Plant.—It is stated that A. J. McArthur has completed arrangements to establish \$75,000 plant for manufacturing by-products from pine wood.

Jacksonville—Mercantile.—C. W. Bartleson, J. S. Allen and W. K. Bartleson have incorporated C. W. Bartleson & Co., with capital stock of \$125,000.

Jacksonville—Mercantile.—Alexander Ossinsky, Emma Ossinsky and H. Heiscovitz have incorporated the Outlet Company, with capital of \$3000.

Jacksonville—Naval Stores Consolidation.—Consolidated Naval Stores Co. will be organized and incorporated, with capital stock of probably \$2,500,000, to take over and operate seven of the largest naval stores factorage plants. It is stated that W. C. Powell, president Southern Naval Stores Co. at Savannah, Ga., will be president.

Sanford—Telephone System.—Sanford Telephone Co. will establish telephone system and extend lines to Orlando.

Tampa—Paint Works.—Mineral Paint and Varnish Works has been organized, with Tucker Savage, secretary; W. D. Wiggins, manager, and capital stock of \$25,000. Plant has been established to manufacture paints, varnishes, wood fillers, japans, etc.; office at 206 Zack street.

Tampa—Mercantile.—S. Lightfoot, Chas. Marshall and H. Lightfoot have incorporated Lightfoot Dry Goods Co., with capital stock of \$25,000.

GEORGIA.

Atlanta—Printing Company.—M. H. Eichberg, I. A. Hirschberg, J. Hirschburg and M. L. Hirsch have incorporated Universal Roll Printing Co., capitalized at \$10,000, with privilege of increase to \$100,000.

Atlanta—Shoe Company.—L. P. Lester and A. F. Whitley have incorporated Lester Whitley Shoe Co., with capital stock of \$8000.

Atlanta—Hat Company.—Alfred Truitt, Jerome Silvey and E. C. Calloway have incorporated Truitt-Silvey Hat Co., with capital stock of \$150,000, for manufacturing and dealing in hats, etc.

Atlanta—Car-wheel Works.—John W. Nute of St. Louis, Mo.; W. F. Newbert and J. Morrison of Illinois have incorporated Atlanta Car Wheel & Manufacturing Co., with capital stock of \$100,000, fully paid in, for manufacturing car wheels, etc. Company's plant

was previously announced as to be built, and is now nearing completion. It is a branch of the St. Louis Car Wheel Works.

Atlanta—Sugar Refinery.—Thos. S. Burr of New York, Jos. H. Jordan and Eugene R. Black of Atlanta have incorporated Electrolytic Purifying Co., with capital stock of \$1,500,000, and privilege of increasing to \$5,000,000, for refining sugar, etc.

Atlanta—Publishing.—R. L. Reynolds, Wm. A. Simms and Chas. F. Durnell have incorporated Atlanta Publishing Co., with capital stock of \$25,000.

Barnesville—Knitting Mill.—Oxford Knitting Mills will add 80-horse-power boiler and engine, also finishing and knitting machine, to increase present output of plant.*

Brunswick—Paint-oil Factory.—Brunswick Paint Oil & Varnish Co., reported last week, has completed its plant and manufactures a substitute for linseed oil in paints. Capital is \$50,000.

Camilla—Electric-light and Ice Plant.—Mitchell County Fertilizer Co. will build an ice and cold-storage plant and an electric-light plant.

Camilla—Cannery.—W. H. Culpepper contemplates installing canning plant.*

Columbus—Cotton Mill.—Muscoogee Manufacturing Co. (reported September 11 as proposing an additional mill) states that its plans do not warrant any definite information being given at present.

Columbus—Showcase Factory.—J. M. Britt, J. Edgar Britt, Jas. A. Johnson and T. U. Butts have incorporated Georgia Showcase Co., and will build manufacturing plant for showcases, etc. Capital stock is \$20,000, with privilege of increase to \$100,000.

Demorest—Bobbin and Shuttle Mill.—J. S. Adams of Demorest and L. M. James of Toronto, Canada; C. W. Oakes of Nacoochee, Ga., and R. L. Kennon of Tallahassee, Fla., will establish shuttle, spool and bobbin mill at Demorest. Water-power will be used.

Gainesville—Woodworking Plant.—H. T. Baker will establish woodworking plant for producing buggy bodies, novelties, etc.

Gainesville—Coffin Factory.—Albert Morgan will establish coffin factory at Main and Church streets.

Gainesville—Pyrites Mines.—Chestatee Pyrites Co. (composed of Atlanta and Savannah parties) has begun development of pyrites deposits on 1000 acres of land located about twenty miles from Gainesville. A large working shaft is now being sunk, and shipments are expected to begin upon the completion of Gainesville & Dahlonga Railroad, now being constructed. The ore is said to be high grade, carrying some copper pyrites and gold, running in a vein about twenty-eight feet wide from wall to wall. The company incorporated recently with Geo. J. Baldwin, president; Geo. W. Scott, vice-president; C. M. Candler, treasurer, and N. P. Pratt of Atlanta, managing engineer.

Griffin—Cotton Mill.—Griffin Manufacturing Co. expects to add 10,000 spindles and about 800 looms next year. The present plant has 16,536 spindles and 593 looms.

Macon—Lumber Company.—J. P. Stetson, E. W. Stetson and J. M. Matthews have incorporated Stetson Lumber Co., with capital of \$3000.

Norcross—Tannery.—A. A. Martin, T. B. Ray, H. H. Dean, A. A. Johnson, O. O. Simpson and others have incorporated Southern Oak Leather Co., with capital stock of \$50,000, for operating a tannery, manufacturing harness, etc.

Ringgold—Cotton Mill.—Ringgold Cotton Mills will organize, with capitalization of \$100,000, to build plant; W. H. Odell, president; W. W. McClain, vice-president, and J. E. Satterfield, secretary.

Rome—Trousers Factory.—Rome Manufacturing Co. will double its capital and add new machinery to double its capacity.

Savannah—Paint, Oil, etc.—T. E. King, J. S. Schwarz, R. P. Oxley and R. G. Stevens have incorporated King-Mead Company, with capitalization of \$100,000, to deal in paint, oil and wallpapers.

KENTUCKY.

Bowling Green—Flour Mill.—J. E. Poynter & Son will rebuild their flour mill recently burned. Daily capacity will be 300 barrels or more.

Cloverport—Coal Mines.—Auburn Ash Coal Co. has been incorporated, with capital stock of \$50,000, to develop coal lands, by Attila

Cox, J. Sprat Bridges and Richard N. Hudson.

Covington—Manufacturing, etc.—Chartered: Co-operative Manufacturing & Home Co., \$5000 capital, by J. A. Gorrell, J. H. Dold and Conrad Orr.

Georgetown—Ice Plant.—J. M. Hunt contemplates building 20-ton ice plant.*

Greenville—Coal Mines, etc.—Harry Morton and Horace Mason of Greenville and Geo. A. Steed of Sumner, W. Va., have incorporated Drakesboro Coal, Coke & Manufacturing Co. for coal mining, etc. Capital stock is \$15,000.

Lexington—Flour-spar and Zinc Mines.—It is reported that Boone's Creek Mining Co. has ordered an extensive plant to increase the output of its flour-spar and zinc mines, and that gold deposits will be developed.

Louisville—Sausage Factory.—Incorporated: Louisville Sausage & Delicatessen Co., capital \$1000, by John Hirth, M. A. Faudel and C. A. Faudel.

Louisville—Mineral Company.—Incorporated: Kentucky Mineral Co., capital stock \$6000, by H. A. J. Puls, V. P. Collins, A. M. Hunter, C. Pope and A. T. Pope.

Middlesboro—Coal Mines.—Hugh Drummond and George Duke have incorporated Stony Fork Coal Co., with capital stock of \$30,000, to develop mines.

Paducah—Tobacco Factory.—Flournoy Tobacco Co. has ordered E. T. Brainard to prepare plans for construction of factory building, of brick, 60x220 feet, with a 100-foot ell, to cost about \$10,000.

Prestonsburg—Brick Works.—Draughan & Draughan will establish brick works.

LOUISIANA.

Empire—Fisheries.—Bayou Cook Navigation & Fishery Co. has been incorporated, with capital stock of \$40,000, by F. C. Moyers, M. P. Doulet, W. B. Easterling, S. Leopold and F. M. Stockfleth.

New Orleans—Blow-pipe Works.—National Blow Pipe & Manufacturing Co., Ltd., has been incorporated, with capital stock of \$20,000, to manufacture blow-piping, dust collectors, etc., by E. H. Easterling, F. A. May and A. C. Posner.

New Orleans—Cannery.—G. W. Dunbar & Sons will erect an additional oyster cannery and fishing station of 15,000 barrels capacity daily. It is said from \$20,000 to \$25,000 will be expended.

New Orleans—Cotton-oil Refinery.—Company previously reported as to build cottonseed-oil refinery has permanently organized as Seaboard Refinery Co. and awarded contracts for construction of plant. Plant will cost about \$125,000. A. P. Sauer is president, and Ernest T. George, vice-president.

New Orleans—Creosoting Plant.—Southern Creosoting Co., Ltd., has been incorporated, with capital stock of \$100,000, to establish creosoting plant for wood, etc.; C. S. Walker, president; C. B. Lowry, vice-president, and K. L. Armstrong, secretary.

New Orleans—Real Estate.—Crescent Home Co., Ltd., has been incorporated, with capital of \$5000; A. J. Rojas, president, and Leopold Welsch, secretary.

New Orleans—Stave Mill.—Brice L. Whyte of Liverpool, England, contemplates establishing an extensive stave mill. He is not registered at the St. Charles, New Orleans.

Opelousas—Sewerage System.—City has received plans and estimates on proposed sewerage system, and will call election to vote on \$30,000 in bonds to pay for the work. Address "The Mayor."

MARYLAND.

Baltimore—Fruit Company.—Geo. W. Orem, Jr., Oscar B. Orem, J. Spencer Clark and others have incorporated Orem Fruit & Produce Co., with capital stock of \$10,000, to succeed Messrs. Geo. W. Orem, Jr., & Sons.

Baltimore—Telephone System.—International Telephone Co. has been incorporated, with an authorized capital of \$200,000,000, to manufacture telephone apparatus, install telephone systems, etc. S. H. Reinhart of Waynesboro, Pa., is president; Eblem E. Harrison of Baltimore, treasurer; Henry F. Fahey of New York, secretary, and J. Miller Kenyon of Washington, D. C., assistant secretary.

Baltimore—Structural Iron Works.—Baltimore Bridge Co., recently incorporated with capital stock of \$1,200,000, has purchased the Structural Iron & Steel Co. and plant, which

was capitalized at \$200,000. Extensive improvements will be made, including the erection of a new girder shop to cost about \$75,000. Nathaniel Haven is president.

Baltimore—Wheel Factory.—John Stinson, Holliday and Hillen streets, will erect five-story building 28x83 feet to replace structure recently burned. Machinery for manufacturing hubs, spokes, etc., will be installed.

Baltimore—Marble-machine Works.—Wm. O. Smith, Thos. M. Oler, Jos. M. Winkler, Geo. W. Parsons and Taylor Simmons have incorporated Mobilepoint Sculpture Co. to manufacture machines for stone, marble, wood and other carving, with capital stock placed at \$10,000.

Oakland—Coal Mine.—P. T. Garthright of Mountain Lake Park, G. H. Pritchard, Isaac Strout, J. E. Strout and A. D. Naylor of Oakland have purchased and will develop coal mine on a 300-acre tract of land near Oakland.

Washington, D. C.—Machine Works.—Chartered: Harmon S. Palmer Hollow Concrete Building Block Co., to manufacture machinery for making hollow concrete building blocks, and capital stock is \$2,000,000. Harmon S. Palmer is president.

Washington, D. C.—Water-power-Electrical Plant.—Reference was made last week to dispatches stating that English capitalists contemplated investing about \$5,000,000 in the development of the power of Potomac Falls, near Washington, for transmission by electricity. The facts are that J. F. McLaughlin, Temple Building, Toronto, Canada, claims to have been engaged on this project for several years, and that it is proposed to construct a dam which will develop about 16,000 horse-power, to be extended later on so as to furnish 25,000 horse-power. Another dam at another location on the Potomac river is also contemplated. The land and water rights necessary for these purposes have passed into control of British capitalists, and Mr. McLaughlin states they are Ernest Terah Hooley, London, England, and his partner, J. Carling Kelly of The Hall, Cocayne, Hartley, Bedfordshire, England, and associates. Russell Thayer, Fairmount Park, Philadelphia, Pa., is the American representative.

MISSISSIPPI.

Auburn—Mercantile.—Incorporated: Auburn Mercantile Co., capital stock \$20,000, by J. P. Carruth, R. M. Carruth, M. L. Burton, F. J. Kenna and others.

Jackson—Mineral Developments.—S. J. Johnson, T. M. Gaddis, W. G. Wells and others have incorporated Acidine Mineral Co. to develop minerals for the manufacture of acids.

Mayersville—Manufacturing, etc.—Chartered: Issaquena Planting & Manufacturing Co., capital stock \$250,000, by J. H. Levy, L. L. Scheurer, Charles McInnis, Adolph Hirsch and M. D. Landau.

Nola—Land Company.—S. E. Moreton, A. E. Moreton, Nola White and others have incorporated Nola Land Co., with capital stock of \$10,000.

Vicksburg—Cotton-oil Company.—Chartered: Refuge Cotton Oil Co., with capital stock of \$100,000, by Wm. A. Montgomery, W. Nephew King and E. M. Durham.

MISSOURI.

Cartersville—Mining.—Grer Mining Co. has been incorporated, with capital of \$24,000, by W. B. Kane, W. B. Shackelford, J. W. Grier and others.

Carthage—Mining.—W. R. Logan, Perry Webster, L. E. Archias and others have incorporated Main Street Mining Co., with capital stock of \$50,000.

Kansas City—Coal Company.—Devlin-Miller Coal Co. has been incorporated, with capital stock of \$300,000, by Chas. J. Devlin, John R. Miller and others.

Kansas City—Distilling.—Ernest Kellerstrass, Chas. G. Perlin, C. L. Kellerstrass and Geron B. Silverman have incorporated Kellerstrass Distilling Co., with capital stock of \$500,000.

Niangua—Lead and Zinc Mines.—J. J. Redmond and Chicago parties have organized Ozark Mining Co., with capital stock of \$5,000,000, to develop lead and zinc mines near Niangua.

St. Joseph—Lumber Company.—Henry W. Huttig, Wm. Huttig, Frank J. Mass and others have incorporated Huttig-Mass Lumber Co., with capital stock of \$500,000.

St. Louis—Car and Truck Works.—G. Martin Brill, Jas. Rawie, Wm. H. Heulings, Jr., Wm. M. Lyette, Samuel M. Curren and others have incorporated American Car & Truck Co., with capital stock of \$1,000,000. Company's specific purpose is not stated, but the title indicates car and truck manufacturing.

Sweet Springs—Electric-light and Water Works.—Hodge & Walsh of Kansas City are preparing plans for electric-light plant reported last week. J. J. Smith of Sweet Springs is preparing plans for the water-works. Amount available is \$12,000. Address "The Mayor."

NORTH CAROLINA.

Asheville—Furniture Factory.—C. B. Jordan will organize \$50,000 company to establish furniture factory.

Asheville—Electric Company.—Incorporated: Piedmont Electric Co., capital \$25,000, by William Farr, George L. Hackney and J. H. Weaver.

Aurora—Telephone System.—H. A. Swindell, Robt. Griffin, L. D. Bonner, M. B. Wilkerson, B. T. Bower and others have incorporated Washington-Aurora Telephone Co., with capital stock of \$25,000, to establish system.

Columbia—Telephone System.—Incorporated: Alligator Telephone Co., \$25,000 capital, to operate telephone lines, by W. P. Jordan, Jr., of Norfolk, Va.; J. W. Sykes and Mark Ayldett of Columbia.

Concord—Water-works.—City is preparing to begin construction of the \$70,000 water-works plant recently reported. Machinery and materials will soon be wanted. Address "The Mayor."

Fuquay Springs—Turpentine Plant.—Fuquay Springs Manufacturing Co. will rebuild its burned plant for manufacturing turpentine, creosote, wood alcohol, etc.

Gastonia—Telephone System.—Piedmont Telephone & Telegraph Co. has been incorporated, with capital stock of \$11,300, and privilege of increase to \$100,000, by W. T. Love, R. B. Babbington and J. W. Ware of Gastonia, and N. B. Kendrick of Cherryville, N. C.

Hamlet—Printing Plant.—Capitol Printing Co. of Raleigh will increase capital from \$13,000 to \$25,000 and remove plant to Hamlet. E. A. Lackey and associates will erect two-story brick building to accommodate the plant.

North Carolina—Cotton Mill.—J. M. Torrance of Huntsville, Ala., proposes organizing company to build mill for the production of fine goods in Western North Carolina.

Thomasville—Wagon Works.—Ryder Wagon Works will be incorporated, with W. B. Ryder, president; W. B. Ryder, Jr., treasurer, and S. W. Cramer, vice-president, all of Charlotte, capital to be \$25,000, with privilege of increasing to \$100,000. Forty-acre site has been secured, and the plant will be erected for annual capacity of 8000 wagons. Buildings will include erecting shop 50x175 feet, blacksmith shop 50x50 feet, wagon warehouse and finishing shop 50x175 feet, with power-house, saw-mill, dry-kilns, etc. Plans have been prepared. Address W. B. Ryder at Charlotte.

Washington—Water-works.—Stephen S. Spruks has obtained franchise for construction of water-works. Address care of Geo. T. Leech.

SOUTH CAROLINA.

Anderson—Cotton Mill.—R. S. Hill, president Farmers and Merchants' Bank, will organize \$500,000 company to build cotton mill of 25,000 spindles and about 750 looms.

Batesburg—Drug Company.—Chartered: Batesburg Drug Co., capitalized at \$3000, with R. C. Garland, secretary.

Batesburg—Dry Goods.—Chartered: Whitten Dry Goods Co., capital \$10,000, by J. A. and M. E. Whitten and G. S. Covin.

Central—Cotton Mill.—Endeavors are being made to organize cotton-mill company. D. K. Norris of Catechee, S. C., is said to be interested.

Charleston—Engineering Company.—Southern Engineering & Contracting Co. will be incorporated by R. B. Cuthbert, Frank C. Ford, W. R. Mayrant, C. B. Jenkins and R. S. Whaley, with capital stock of \$100,000, for general engineering, and especially to bid for the contract for the erection of dry-dock at the navy-yard.

Columbia—Cotton-mill Machinery.—Louis I. Guion, J. W. Babcock, L. J. Wrigley, W. B. Smith Whaley and August Kohn have incorporated Columbia Metalfle Roll Co., with capital stock of \$100,000, to manufacture a patented cotton-mill machine.

Cheraw—Electric-light Plant.—W. F. Stevenson, William Godfrey and N. T. Cobb have under consideration the establishment of an electric-light plant.*

Enslay—Publishing.—Easley Publishing Co. has been incorporated, with capital of \$2000, by R. F. Smith, D. F. Bradley, B. C. Johnson and J. T. Lathen.

Kershaw—Electric-light Plant.—Kershaw Oil Mill will build an electric-light plant, and

H. Gould, engineer in charge, can supply specifications.*

Laurens—Cotton Mill.—W. E. Lucas, president of Laurens Cotton Mills, will organize \$200,000 company to build another cotton mill. New York capital will be interested.

McBee—Construction Company.—Chartered: Southern Construction Co., with capital of \$5000; Ernest Williams, president; J. H. Diggs, vice-president, and R. F. Yates, secretary.

TENNESSEE.

Chattanooga—Foundry and Machine Works. Chattanooga Machinery Co. has purchased site and will erect foundry and machine shops; foundry building to be of stone and brick, 60x120 feet, to cost \$7000; machine shop of brick and stone, 100x150 feet, to cost \$13,000; pattern shop of brick, 50x50 feet, and storage building 50x50 feet.

Chattanooga—Textile Company. J. H. Parham, J. B. Milligan, J. A. Carter and others have incorporated Chattanooga Cotton Felt Co., with capital stock of \$10,000.

Chattanooga—Woolen Mills.—Cleveland Woolen Mills of Cleveland, Tenn., will erect at Chattanooga a woolen mill. A portion of the machinery at Cleveland will be removed to Chattanooga.

Chattanooga—Woodworking Plant.—De Rochemont Manufacturing Co. will enlarge its plant, erecting an additional building of iron 20x50 feet and installing machinery to manufacture curtain-pole rings and trimmings, whereas heretofore company has manufactured only poles.

Dyersburg—Telephone System.—It is proposed to organize company to establish a telephone exchange. W. C. Parrish can give information.

Helenwood—Coal Mines.—T. A. Wright and associates, reported last week as to develop coal mine, will operate as the Scott County Coal Co., with principal office at Rockwood, Tenn.

Huntsville—Land Improvements.—D. L. Potter of Pennsylvania, Chas. M. Talbot of New York and E. G. Foster of Tennessee have incorporated Yellow Cliff Land & Improvement Co., with capital stock of \$50,000.

Iron City—Stave Mill.—Chas. A. Campbell of Dickson, Tenn., will establish stave mill at Iron City.

Kingston—Coal Mines.—Chartered: New Cumberland Coal Co., with capital stock of \$25,000, by Jesse L. Rogers, M. O. French, John W. Staples, John H. Hatfield and Saml. Staples, for developing coal mines.

Knoxville—Upholstery Factory.—Chartered: Southern Upholstering Manufacturing Co., with capital stock of \$10,000, by G. F. Price, J. E. Hickman, H. A. Northington, M. S. McClellan and S. B. McClellan.

Memphis—Railroad Shops, etc.—Illinois Central Railroad has let contract to Geo. B. Swift Co. of Chicago for the erection of its proposed new shops and roundhouses, announced recently as to be built at Memphis. About \$500,000 will be expended for these and other accompanying betterments.

Mingo—Coal Mines.—John Ralston, H. M. Ralston and others have incorporated Stony Fork Coal Co., with capital stock of \$50,000, for the development of coal mines.

Nashville—Chair Factory.—Nashville Chair & Carriage Co. will rebuild its factory recently burned.

Nashville—Woodworking Plant.—Eugene Adler of Louisville, Ky., is said to contemplate establishment of woodworking plant at Nashville.

Nashville—Dry Goods.—Incorporated: Williams Dry Goods Co., by Z. D. Baird, R. B. Baird and others; capital stock \$40,000.

Whiteside—Coal Mines and Coke Ovens.—Etna Coal & Coke Co. has decided to make the improvements reported last week as contemplated. Output of the mines will be increased about 200 tons per day, and the coke output about fifty tons per day; D. W. Miller, manager.

TEXAS.

Beaumont—Oil Wells.—Chartered: Preemption Oil Co., capital stock \$25,000, by B. B. Sinder of Aledo, Ill.; C. C. Clarke, Foster Armstrong, J. C. Sinder and A. D. Shearman of Preemption, Ill., to drill for oil.

Beaumont—Oil Wells.—Chartered: Mississippi Valley Oil Co., capital stock \$100,000, by Clem A. Jamison, Christian C. Magenheimer of Peoria, Ill.; Charles J. Danielson of Hamlet, Ill.; W. Scott Heywood and Dewey Heywood of Beaumont, to drill for oil.

Beaumont—Oil and Power.—Caine-Steiner Oil & Power Co. has been incorporated, with capital stock of \$100,000, by O. C. Herenkind, Robt. Steiner and B. Duester.

Beaumont—Planing Mill.—Turner & Nabers Lumber Co., reported last week with \$50,000 capital, will build a large planing mill.

Calvert—Cotton-gin Works.—International Cotton Gin Co., reported last week as incorporated with capital stock of \$500,000, intends to export cotton-ginning machinery, including a new gin recently patented. This machinery will be manufactured in the South by a separate corporation. Principal offices are in the Mills Building, 15 Broad street, New York city.

Columbia—Cattle Company.—Incorporated: Columbia Cattle Co., capital stock \$10,000, by W. L. Creus, W. R. Nach and T. L. Smith, Jr.

Corsicana—Novelty Company.—R. L. Dockum, A. O. Smith and M. S. Dockum have incorporated Corsicana Novelty Co., with capital stock of \$5000.

Crockett—Lighting Plant.—Incorporated: Citizens' Light Co., capital stock \$10,000, by Dan McLean, Charles L. Edmiston and John R. Smith.

Dallas—Chemical Plant.—It is stated that Martin Chemical Co. of Quincy, Ill., is removing to Dallas its plant, capitalized at \$15,000.

El Paso—Iron Furnace.—B. L. Berkey contemplates building an iron furnace.

Fort Worth—Telephone System.—Fort Worth Telephone Co. has been organized with H. A. Fuller, president; Jos. N. Lloyd, secretary; J. L. Dunn, H. A. Fuller, F. M. Kirby and others, directors, all of Wilkes-Barre, Pa. Company has capital stock of \$200,000, and the organizers were named last week as to organize such a company.

Lubbock—Electric Company.—C. E. Spath, M. C. Abernathy and H. S. Graham have incorporated Lubbock Electric Co., with capital stock of \$100,000.

Marshall—Water-works.—City will expend \$15,000 to improve its water-works. Address "The Mayor."

San Antonio—Telephone System.—San Antonio Telephone Co. will make extensive additions to its plant.

Weatherford—Knitting Mill.—Weatherford Cotton Mills (now installing 3500 spindles) has decided to establish a knitting plant.

VIRGINIA.

Berkley—Guano Factory.—It is reported that J. W. Bickelstaff of Richmond, Va., will build a \$7000 guano factory at Berkley.

Berryville—Water-works.—City has engaged B. G. Adelsberger of Baltimore, Md., to prepare plans for improvements to its water-works. A 600,000-gallon reservoir will be built. Address "The Mayor."

Bristol—Coal Lands.—The Cranes Nest Co. has been chartered, with authorized capital of \$10,000,000, to develop coal lands in South-West Virginia, and probably iron mines also. G. L. Carter is president; J. N. Powell, vice-president, and T. F. Davis, secretary.

Clifton Forge—Iron Mines.—A. M. Stull of Rich Patch, Va., and A. W. Persinger of Longdale, Va., have purchased at \$8000 a 2200-acre tract of land containing iron ore, and will open mines.

Fredericksburg—Granite Works.—Cartwright & Davis have purchased new site, erected new buildings and ordered additional machinery for their granite works.

Graham—Water-works.—Frederick Minshall of Greenwood, S. C., has received contract at \$17,300 for construction of water-works at Graham.

Norfolk—Industrial Development.—Incorporated: Tanners Creek Development Co., with a capital of from \$20,000 to \$100,000; L. L. Jackson of Baltimore, Md., president; A. A. Blakeney of Baltimore, vice-president; H. L. Lowenberg of Norfolk, secretary-treasurer. Company's purpose is to improve real estate, build factories, wharves, etc.

Petersburg—Telephone.—Mutual Telephone Co. and Southern Bell Telephone Co. have incorporated as the Petersburg Telephone Co., with capital stock of \$100,000; W. V. McIlwaine, president, and R. D. Gilliam, secretary.

Portsmouth—Cemetery.—Mt. Hermon Cemetery Association has been incorporated, with capital of \$5000; M. P. Claude, secretary.

Richmond—Ice and Cold-storage Plants.—Eureka Ice & Cold Storage Co. has been incorporated, with capital stock of \$50,000, purchased and will operate two established plants. W. G. Tucker is president; G. M. Gaubert, vice-president, and W. O. Pollard, secretary.

Rileyville—Iron Mines.—H. S. Reeside, lately reported to develop iron mines, will operate as the Bonanza Iron Co., Geo. F. Huff and Henry F. Seannor of Greensburg, Pa.; J. W. Whelpley and J. R. Wellington of Washington, D. C., being interested. Address H. S. Reeside, secretary, 1405 G street N. W., Washington, D. C.*

Roanoke—Machine Shops.—Miller & Higdon will build machine shops; offices at Patterson and D streets.

Roanoke—Railroad Shops.—A special dispatch states that Norfolk & Western Railway will expend about \$250,000 to build locomotive construction shops additional to its present machine shops, and to build depot and make extensive terminal improvements. L. E. Johnson is general manager.

Roanoke—Machine Shops.—H. B. Rockhill of Lynchburg, Va., will establish machine shop at Roanoke.

Salem—Wagon Works.—Oakley Wagon Co. has been incorporated, with capital stock of \$25,000, to manufacture and deal in wagons and other vehicles. E. E. Hughes of Lynchburg is president, and O. T. Oakley of Salem, secretary-treasurer.

South Boston—Buggy Factory.—Barbour Buggy Co. proposes building a large buggy and body factory additional to its present extensive plant.

WEST VIRGINIA.

Beckley—Electric-light and Water Works. City is desirous of arranging with capitalists for construction of water-works and electric light plant. Address "The Mayor."

Clarksburg—Water-works. Steelton Land Co., reported last week with capital stock of \$250,000, proposes constructing a complete system of water-works. Thus, Pettigrew is consulting engineer.*

Clarksburg—Coal Mine.—Pittsburg (Pa.) Plate Glass Co. states there is no truth in the recent reports that it intends to develop coal mines in West Virginia.

Huger (P. O. at Welch)—Coal Mines.—Harry B. Olmstead of Columbus, Ohio, will organize company to reopen an idle coal-mining shaft near Huger.

New Cumberland—Coal Mines.—Marquett Coal Co. is preparing to erect new tipple and install electric machinery to double output of its mines.

Old Gaulty—Coal Mines.—C. M. Guggenheimer, John H. Lewis, James E. Edmonds, John E. Horsley and John T. Carter, all of Lynchburg, Va., have incorporated Dietz Colliery Co., with capital stock of \$250,000, to mine for coal.

Sistersville—Glass Company.—Tyler Window Glass Co. has organized, with capital of \$50,000, to build plant recently announced as projected by A. S. McCoy and associates. A. S. McCoy is president and Jasper Haught, manager. Plans and specifications are being completed, and contracts will be let for 12-point plant.*

Wheeling—Gun Works.—Hollenbeck Gun Co. will increase capital from \$40,000 to \$65,000.

Wheeling—Enameling and Stamping Plant. Belmont Stamping & Enameling Co., recently reported, has organized by election of Thos. Troll, president; Alexander Neff, vice-president, and U. G. Fletcher (of Bellaire, Ohio), secretary-treasurer. Authorized capital is \$100,000, of which amount \$50,000 will be paid in at once, so that plant can be built.

Womelsdorf—Coal Mines and Coke Ovens.—La Belle Iron and Steel Works of Steubenville, Ohio, has purchased 230 acres of coal land near Womelsdorf at \$31,200. It is said mines will be opened and coke ovens built.

INDIAN TERRITORY.

Duncan—Electric-light and Ice Plants.—L. E. Bumpass of Farmersville, Texas, has about contracted for his electric-light plant at Duncan, reported last week. The ice plant will probably not be installed until next spring.

Purcell—Water-works.—Purcell Water Co. has obtained franchise for construction of water-works, and will at once install system.

OKLAHOMA TERRITORY.

Clifton—Cotton Gin.—J. B. Koonz, M. J. Thompson, J. M. Littleton, W. S. Martin and others have incorporated Farmers' Gin Co., with capital stock of \$10,000, to operate cotton gin.

Fairview—Mercantile.—Henry, George and Alice Bower have incorporated Bower Bros. & Co., with capital of \$15,000.

Garber—Telephone System.—J. D. Carpenter, J. D. Morgan and Wm. Groneman have incorporated Oklahoma Rural & Municipal Telephone Co., with capital of \$2000.

Lawton—Townsite Company.—Geo. Bromhoff of St. Louis, Mo.; Allen L. Wiggins, Warren K. Schneider and Isaac Terris have incorporated Craterville Townsite Co., with capital stock of \$100,000.

Moore—Cotton Gin.—J. L. Davis, Frank Faris, C. J. Weihe and others have incorporated Moore Ginning Co., with capital stock of \$5000, to operate cotton gin.

Oklahoma City—Pharmacy.—T. J. Simms, F. H. Simms and W. C. Reeves have incorporated Oklahoma Pharmacy Co., with capital stock of \$50,000.

Thomas—Milling Company.—J. W. Maney of El Reno, John Maney and F. H. Wheeler of Weatherford have incorporated Thomas Milling Co., with capital stock of \$50,000.

Tryone—Townsite Company.—H. L. Huber, A. W. Ibde, J. A. Hughes and others have incorporated Tryone Townsite & Water Co., with capital stock of \$2500.

Weatherford—Mining.—J. J. Williams and C. A. Miliken of Weatherford, C. E. Haggard of Orona, O. T.; T. J. Hawkins of Asheville, N. C., and others have incorporated Eclipse Mining Co., with capital stock of \$250,000.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Alexandria, La.—City Hall.—City has voted \$25,000 in bonds for erection of City Hall. Address "The Mayor."

Baltimore, Md.—Office Building.—Fidelity & Deposit Co. has ordered Baldwin & Pennington to prepare plans for 25x125-foot addition to present building; will expend about \$100,000.

Baltimore, Md.—Warehouse.—Griffith & Turner have let contract to John Cowan for erection of five-story warehouse 35x85 feet, of brick and iron, to cost about \$8000.

Baltimore, Md.—Church.—E. J. Parrish has let contract to erect church 50x105 feet, of granite, to cost about \$24,000.

Baltimore, Md.—Synagogue.—B. J. Bennett has contract to build synagogue 64x76 feet, two stories high, of brick and stone, to cost about \$27,000, after plans by Louis Levi.

Baltimore, Md.—Hotel.—Belvedere Building Co., Nelson Perin, president, has received from Parker & Thomas of Baltimore and Boston, architects, new and enlarged plans for Belvedere Hotel, previously reported. Structure will be 108x186 feet, ten stories high, to contain 300 bedrooms, five elevators, electric plant, refrigerating plant and other modern equipments, at a total cost of about \$1,750,000. W. A. & A. E. Wells of Philadelphia and Chicago have the contract.

Baltimore, Md.—Telephone Exchange.—Chesapeake & Potomac Telephone Co. is having plans prepared by C. T. W. Elditz of 1125 Broadway, New York, for branch telephone exchange to cost, with equipment, about \$175,000.

Baltimore, Md.—Warehouse.—B. Tilghman has let contract to E. M. Noel for construction of warehouse 60x100 feet, of stone, brick and steel, with elevators, steam heat, electric lights, etc., at a cost of \$75,000.

Catonsville, Md.—Church.—Owens & Slaco of Baltimore have prepared plans for erection of church 50x150 feet, of stone, to cost \$15,000.

Columbia, S. C.—Hotel.—Mrs. Lily M. Fagan of New York city will build hotel 90x208 feet, four stories high, with electric passenger elevator, two freight elevators, steam heating, hardwood finish, marble tiling, etc., after plans by Charles C. Wilson of Columbia. Plans will be ready by October 15.*

Columbus, Ga.—Association Building.—Y. M. C. A. has let contract to Barrow Bros. at \$17,181 for construction of building to contain dormitories, swimming pools, gymnasium, etc.

Concord, N. C.—Office Building.—W. M. Smith will erect an office building.

Gainesville, Ga.—School.—City has ordered J. W. Golucke of Atlanta to prepare plans and specifications for its proposed \$20,000 school building. Address "The Mayor."

Gulfport, Miss.—Store Buildings.—Gulfport Real Estate Improvement Co. will build ten or twelve brick store buildings after plans by Thos. S. Sully of New Orleans.

Jacksonville, Fla.—Business Buildings.—Fred Betelline will erect three-story business block 62x100 feet, three stories high, etc. Gus Erickson will erect three-story brick building 35x68 feet. J. S. Roark, 45 Stockton Bldg Building, is architect for both structures.

Kansas City, Mo.—Warehouse.—Adams Storage & Transfer Co. will erect warehouse four stories high, 175-foot front, of brick and stone, heavy mill construction, to cost \$20,000.

Kansas City, Mo.—Apartment-house.—W. H. Collins will erect apartment-house 41x130 feet, with all modern improvements, to cost \$40,000. John W. McKeeknie, New York Life Building, is architect and builder.

Kansas City, Mo.—Office Building.—Jas. H. Beckham contemplates building 10-story office structure to cost \$100,000.

Kansas City, Mo.—Warehouse.—Advance Thresher Co. will erect \$80,000 fireproof ware-

house after plans by Jos. C. Llewellyn of Chicago.

Kansas City, Mo.—Office Building.—Chicago, Milwaukee & St. Paul Railroad will erect two-story brick office building and one-story freighthouse 40x200 feet, to cost \$40,000.

Keyser, W. Va.—Roundhouse.—Baltimore & Ohio Railroad will build a roundhouse for twenty-two engines; Geo. L. Potter of Baltimore, Md., general manager.

Luxora, Ark.—Roundhouse.—St. Louis Southwestern Railway will build a roundhouse. F. H. Britton, St. Louis, Mo., is general manager.

Memphis, Tenn.—Warehouse.—Wright Lime & Cement Co. will build warehouse 70x150 feet, annex 80x50 feet, to cost about \$10,000.

Memphis, Tenn.—Depot.—Referring to recent report that Missouri Pacific Railway will build \$200,000 depot, Russell Harding of St. Louis, company's general manager, states there is no truth in it at present.

Norfolk, Va.—Business Building.—Arthur G. Glasgow of London, England, will erect \$40,000 business building after plans by John K. Peebles.

Paris, Ky.—Courthouse.—Contract has been let at \$157,000 to J. C. Gibson of Logansport, Ind., for construction of courthouse.

Prestonsburg, Ky.—Hotel.—B. C. Gabart will build a \$7000 hotel.

Richmond, Va.—Penitentiary.—Bids will be opened October 23 for erection of cell building of steel and concrete, to contain 336 steel cells; steam heat and electric-lighting plant, plumbing and mechanical ventilating systems, etc. Plans and specifications may be seen at office of P. T. Marye, architect, First National Bank, Newport News; at Room 354, Chamber of Commerce, Richmond, and Room 55, Washington Savings Bank, Washington, D. C. Architect will furnish blank forms, etc.

Richmond, Va.—Mercantile Building.—Whitlock Estate will erect store building to cost about \$40,000, including site. N. E. Anderson is the builder.

Rockport, Texas—Hotel.—Incorporated: Del Mar Hotel Co., capital stock \$50,000, by H. Michaels and others.

St. Louis, Mo.—Hotel.—John H. Terry & Sons represent capitalists who contemplate building \$500,000 hotel.

St. Louis, Mo.—Hotel.—United Improvement Co., Geo. D. Benson, secretary, will build hotel of steel, staff, etc., having 6000 rooms, after plans by Isaac M. Taylor.

St. Louis, Mo.—Hotel.—Holbrook-Blackwelder Real Estate Trust Co. will build 12-story hotel to cost \$500,000.

St. Stephens, S. C.—Jail.—Construction of steel-frame jail building is contemplated. S. W. Russell can give information. Correspondence from manufacturers of steel cages is solicited.*

Tuscaloosa, Ala.—Theater.—Friedman & Loveman are having plans prepared for construction of a theater.

Tryon, N. C.—Hotel.—A company is being organized to build \$10,000 hotel as a winter and summer resort. T. T. Ballenger can probably give particulars.

Webster Springs, W. Va.—Hotel.—Webster Springs Hotel & Sanitarium Co. is having plans prepared for hotel four stories high, 150 rooms, to cost about \$40,000.

Whitesville, Ky.—Church.—J. M. Whitehead has contract at \$5000 for erection of church building.

RAILROAD CONSTRUCTION.

Railways.

Albany, Ga.—It is reported that the Hawkinsville & Florida Southern Railway will be extended from Worth via Sylvester and Camilla to Bainbridge, a distance of about eighty miles. J. W. Pope is president, Atlanta, Ga.

Apalachicola, Fla.—Capt. W. T. Nickol will, it is reported, make the survey for the proposed railroad from Apalachicola via Owl Creek to River Junction, beginning early in October.

Augusta, Ga.—President James U. Jackson of the North Augusta Electric & Improvement Co. writes to the Manufacturers' Record regarding a recent rumor as follows: "Our company does not intend, for the present at any rate, to undertake the building of an extension of our Augusta & Aiken road to Edgfield, S. C."

Austin, Texas.—R. H. Baker and others are promoting a railroad from Mexia to Hillsboro, and may, it is stated, extend it to Cleburne, a total distance of about seventy-five miles.

Bayboro, N. C.—A survey has been completed for the proposed Pamlico, Oriental & Western Railroad. It is to be about forty-

five miles long. M. DeW. Stevenson of New Berne and others are interested.

Birmingham, Ala.—The Louisville & Nashville Railroad, it is reported, will build a branch twenty-seven miles long from a point on its main line, seven miles north of Birmingham, to Mary Lee, Coalburg, Brookside and other points. R. Montfort is chief engineer, Louisville, Ky.

Birmingham, Ala.—General Manager Geo. H. Clark of the Birmingham Belt Railroad writes to the Manufacturers' Record confirming the report that the company intends building several spur tracks.

Birmingham, Ala.—The Southern Railway has, it is reported, secured 120 acres of land at North Birmingham for extending its facilities there. Two miles of additional track have already been authorized to extend the switching facilities at that point. W. H. Wells is engineer of construction, Washington, D. C.

Black Rock, Ark.—It is reported that a preliminary survey will be made for a railroad to run from Corns via Reno, Pocahontas, Black Rock, Powhatan, Lynn, and thence to Newport, about 100 miles. The St. Louis, Iron Mountain & Southern is reported to be interested. H. Rohrer is chief engineer of the latter at St. Louis, Mo.

Charleston, W. Va.—The survey has been completed for the Cheat River Railway from Parsons to Rowlesburg, thirty-two miles, and will, it is reported, be extended to connect with the Chesapeake & Ohio on the south and with Pittsburg on the north. Wesley Molohan and others of Charleston are the incorporators.

Chase City, Va.—The Chase City & Blackstone Railroad has been organized to build its proposed line, thirty-five miles long, the survey having been completed from Chase City to the Meherrin river. The officers are Freeman Epes of Blackstone, president, and George A. Endley of Chase City, vice-president. The directors at Blackstone are R. F. Dillard, H. H. Seny, T. M. Dillard and Freeman Epes; in Lunenburg county, I. B. Ball, William Heatham and T. F. Williams; at Chase City, T. E. Roberts, Thomas D. Jeffress, George A. Endley and J. M. Sloan; treasurer, Norman H. Williams.

Cincinnati, Ohio.—The Carrollton, Louisville & Cincinnati Railway has, it is reported, closed arrangements to secure a direct entrance into Cincinnati for its proposed line. Ex-Congressman A. S. Berry and others are interested.

Dothan, Ala.—It is reported that the Central of Georgia Railroad has begun work to extend its line from Sellersville, Geneva county, to Florida, in the southern part of Covington county, twenty-two miles, in order to make connection through to Pensacola. H. M. Steele is chief engineer, Savannah, Ga.

Fort Worth, Texas.—Mr. F. H. Peters, chief engineer of the Chicago, Rock Island & Gulf Railway Co., writes to the Manufacturers' Record concerning the Rock Island system's projected Gulf extension as follows: "We contemplate a line from Fort Worth to the Gulf, and we have already made a location from here to Houston. The firm of Crech, Lee, Craney & Co. have been awarded the contract from Fort Worth to Dallas, a distance of thirty-four miles. No date has yet been set for building south from Dallas."

Frederick, Md.—The Frederick & Jefferson Electric Railroad Co. has been chartered, with \$125,000 capital, to build an eight-mile line from Frederick to Jefferson on the road to Harper's Ferry. The incorporators are Lewis O. Whipp, Cephas E. Lakin, Eli C. Henn, Harry F. Ditmar, Abraham Hemp, Emory R. Rumsburg, Charles J. Little, T. C. Keller, Milton G. Rice, David Souder, E. W. Doty, W. M. Zimmerman and Charles E. Zimmerman.

Galveston, Texas.—It is stated that arrangements are being made to reconstruct the Gulf & Interstate Railroad from Bolivar to White's Ranch, about thirty-five miles. Joseph P. O'Donnell is receiver, Galveston, Texas.

Geneva, Ala.—Mr. J. J. Morris, one of the incorporators of the Geneva Railroad Co., writes to the Manufacturers' Record saying: "We expect to build the road. It will be of standard gauge, and will be operated by the Central Railroad of Georgia. The length will be only about twelve miles." It will extend from Geneva to Chancellor's Station.

Greensboro, N. C.—The Raleigh & Western Railroad has surveyed a line from Randleman to Worthville, and it is stated will continue on to Greensboro to complete the proposed extension from Ashboro to Greensboro, about thirty-eight miles. George C. MacGregor is chief engineer, 52 Broadway, New York.

Guthrie, Okla.—The Choctaw, Oklahoma & Gulf Railroad has, it is reported, decided to

build the Guthrie line to Sparks. F. A. Mollitor is chief engineer, North Little Rock, Ark. Huntington, W. Va.—The Chesapeake & Ohio Railway is preparing, it is understood, to make large additions to its yard room. Mr. F. W. Scarborough is engineer maintenance of way, Richmond, Va.

Jackson, Miss.—The Union Traction Co. of Chicago has, it is stated, made inquiry of a business man of Jackson as to whether it would pay to build an electric railway from Jackson to Vicksburg.

Little Rock, Ark.—Mr. F. A. Mollitor, chief engineer of the Choctaw, Oklahoma & Gulf Railroad, writes to the Manufacturers' Record confirming the report that the Choctaw & Chickasaw Railroad Co. has been incorporated in Oklahoma for the purpose of building several branch lines of the Choctaw, Oklahoma & Gulf Railroad in the Indian Territory. He says that these branches, if constructed, will be built in the interest of the parent company.

Louisville, Ky.—Savage & Houston of Ashland have taken contracts for nine miles of the Norfolk & Western extension from Nangata to Kenova.

Louisville, Ky.—Mr. R. Montfort, chief engineer of the Louisville & Nashville Railroad Co., writes to the Manufacturers' Record regarding recent rumors as follows: "I am unadvised of any intention on the part of this company to build a railroad from Nashville to Clarksville or from Providence to Shawneetown. Nor do I know anything with regard to double-tracking between Pensacola and Flomaton. It is the intention to improve the Atlanta, Knoxville & Northern Railway, but just what amount will be expended in doing so has not yet been determined."

Louisville, Ky.—The River Road Co. has been incorporated to operate an electric railway from Louisville to Prospect, ten miles. The incorporators are W. F. Booker, Henry A. Bell, William N. Cox, Owen Tyler, Edmund T. Halsey, Lafon Allen and Bethel B. Veech. The company will convert the Louisville, Harrod's Creek & Westport Railroad, a narrow-gauge railway, into the proposed electric line.

Mayking, Ky.—The Ohio & Big Sandy Railroad is making a survey from the head of Elk Horn creek to Whitesburg via Mayking.

Mexico, Mex.—G. Freeman of Chicago has secured concessions for a new railroad in the State of Sonora. The line will run from Alamos to Yabaras, a distance of about eighty miles, with branches from Alamos to San Bernardo. E. B. Tolman, assistant corporation counsel of the city of Chicago, is also said to be interested.

Navasota, Texas.—Hugh Burns has the grading contract for the extension of the International & Great Northern Railroad from Navasota to Madisonville, and the first eleven miles out of Navasota has been sublet to R. Lamb. H. Hanson is another subcontractor interested in the work.

New Martinsville, W. Va.—A branch of the Wabash Railroad, or Burnsville & Eastern, will, it is reported, be built to New Martinsville, a distance of about seventy-five miles; S. D. Brady, chief engineer, Parkersburg, W. Va.

Portsmouth, Va.—Mr. J. M. Barr, vice-president and general manager of the Seaboard Air Line Railway, writes to the Manufacturers' Record as follows: "There is nothing new in the way of the building of a line between Blackstone, Va., and McKenney. There has been some talk of this for a considerable time, but it is not my understanding that there has been any actual commencement of business." From Blackstone it is reported that all the funds required for the line have been subscribed. It is called the Blackstone Southern. Preparations are being made for a survey.

Roanoke, Va.—The Norfolk & Western Railway has purchased 150 acres of land near the West End roundhouse to enlarge its yards.

Salem, W. Va.—A franchise for an electric railway through Salem has been granted to parties who say they desire to build a line from Clarksburg to Sistersville, about forty-five miles. Those interested are Homer B. McKinley, Samuel Gain, S. Broadwater, W. A. Carpenter, E. M. Randolph and A. Matthey.

Shreveport, La.—Mr. P. McIlvried, vice-president and general manager of the Shreveport & Red River Valley Railway Co., writes to the Manufacturers' Record saying: "We expect to build a branch to Winfield, La., a distance of about twenty-eight miles. The country is comparatively level, and very little bridging. We expect to let contracts for grading about October 10."

St. Augustine, Fla.—Mr. E. Ben Carter, general road master of the Florida East Coast Railway, writes to the Manufacturers' Record regarding the Everglades surveys

south of Miami. He says that these surveys, made under the direction of Mr. J. S. Frederick, were simply matters of investigation in an unknown country.

St. Louis, Mo.—Mr. C. B. Eames, president of the Tuxpam Valley Railroad Co. of Mexico, writes to the Manufacturers' Record saying that he has received a letter from Mr. George W. Delts, the vice-president and general manager, announcing that he has commenced the location survey of the road from Tuxpam to a point of connection with the proposed extension of the Mexican Central Railway from the City of Mexico to Tampico. The survey will be completed as rapidly as possible, and arrangements are being made to begin the construction of the line as soon as possible after the survey is finished.

St. Louis, Mo.—M. W. Wambaugh, superintendent of construction and chief engineer of the Missouri & Southeastern Construction Co., 508 Granite Building, writes to the Manufacturers' Record saying: "We have no instructions concerning construction south from Hoxie." This refers to the report that the St. Louis, Memphis & Southeastern Railroad will build from Hoxie to Little Rock.

St. Louis, Mo.—The contracts recently awarded by the Rock Island system for completing the St. Louis, Kansas City & Colorado Railroad cover 125 miles from Versailles, Mo., to the Big Blue river at Kansas City.

Stoneville, N. C.—A movement is under way to secure the building of an electric railway from Stoneville to Spray, about ten miles.

Washington, D. C.—The Washington Traction Co. will, it is reported, build railroad projected from Laurel, Prince George's county, Maryland, to Brookville via Sandy Spring, Montgomery county, a distance of about fifteen miles. H. W. Fuller is general manager, and Gen. George H. Harries, vice-president, Washington, D. C.

Washington, Ga.—The Wilkes Telephone & Electric Co., recently organized, proposes also to build an electric railroad. Boyce Ficklen is secretary and treasurer.

Street Railways.

Columbia, S. C.—E. B. Clark, general manager of the Columbia Railway Co., is quoted as saying that arrangements have been completed for extending the Hyatt Park Line half a mile.

Corsicana, Texas.—The Corsicana Street Railway has begun work on its proposed line.

Dallas, Texas.—The city council has granted to A. K. Bonta a franchise for a street railway on North Harwood street.

Knoxville, Tenn.—It is reported that an independent electric street railway will be built in Knoxville, and that the Knoxville Iron Co. has been asked to supply the power.

Macon, Ga.—The Central Railway Co. has applied for permission to build a spur track.

Richmond, Va.—The Citizens' Rapid Transit Co. has accepted the franchise granted it by the city council.

Rome, Ga.—The City Electric Railway Co. will, it is reported, build an extension to Lindale.

Southern Pines, N. C.—The company which is interested in developing Pinecrest, the new town two miles north of Southern Pines, and heretofore known as Niagara, proposes, it is reported, to build a street railway. J. B. L. Bartlett of Boston is president, and Dr. A. W. O'Ruggles, also of Boston, is general manager, while T. C. S. Richardson, formerly of Apex, is also interested.

St. Louis, Mo.—The St. Louis & Suburban Railroad proposes to build a new roadbed along part of its line.

Wheeling, W. Va.—The City Railway Co. has increased its capital stock to \$400,000, and it is stated that construction contracts will soon be awarded.

Installation of Machinery.—The Bourne-Fuller Company reports that with the additional cutting-off machinery just installed it is able to ship immediately structural shapes from the Cleveland yards. This firm has heretofore been rather handicapped, owing to the delay in setting up this equipment, but is now in better shape than ever to handle orders requiring prompt attention.

Land for Sale.—Forty thousand acres of oak, ash, gum, pecan, persimmon, elm and cypress timber land in one body is for sale on the White river, Arkansas. This property is located on the extension of the Iron Mountain route building through that section. For full particulars address J. Earnest Jarrett, Marianna, Ark. The same party has 3500 acres of timbered land lying tolerably close together in Eastern Arkansas, well covered with oak, ash, gum and elm. The price of this property, which is near a navigable river and within a few miles of a railroad, is \$6.50 per acre.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Ball-bearing Wheels.—J. E. Minter, care H. Stevens' Sons Co., Macon, Ga., wants small ball-bearing shift wheels manufactured.

Boiler.—Florence Wagon Works, Florence, Ala., wants second-hand boiler, which can be refitted for compressed-air tank, 500 to 1000 cubic feet.

Boiler and Engine.—See "Knitting Mill."

Boiler and Engine.—E. B. Tyler, Tulane Hotel, Nashville, Tenn., wants (dealers' price) second-hand Corliss engine 12x36 and 7x18 boiler with full flush fire front without stack; quote delivered at Nashville.

Boilers and Engines.—Frog Mountain Ore Co., M. O. Guiss, treasurer, Cedar town, Ga., wants boilers and engines.

Bottling Machinery.—G. Lee Wainscott, Winchester, Ky., wants shot bottle washer and large filter and a carbonator.

Building Equipment and Materials.—Electric passenger elevator, two freight elevators, steam heating, pump, filter, pressed brick, marble tiling, hardwood finish, plate glass, etc., will be wanted for hotel at Columbia, S. C.; Charles C. Wilson of Columbia, architect; Mrs. Lily M. Fagan of New York city, owner.

Cannery.—W. H. Culpepper, Camilla, Ga., wants prices on cannery equipment.

Crusher.—Steelton Land Co., Clarksburg, W. Va., will probably want a stone crusher.

Dry-kiln.—Jefferson County Brick Co., Thirty-sixth and Market streets, Louisville, Ky., wants dryhouse with capacity of about 50,000 bricks daily.

Electric-light Plant.—See "Water-works Equipment."

Electric-light Plant.—Kershaw Oil Mill, Kershaw, S. C., will open bids October 14 to furnish and complete electric-light plant. Specifications can be obtained from Kershaw Oil Mill or H. Gould, engineer in charge.

Electric-light Plant.—W. F. Stevenson and associates, Cheraw, S. C., are prepared to correspond regarding estimates on installing electric-light plant.

Electric Machinery.—Sayre Bros., Newport News, Va., want one each 2 and 10 and possibly 15-horse-power 220-volt three-phase 60-cycle induction electric motors; second-hand in prime condition will do.

Electric Plant.—Del Rio Electric Light & Power Co., Fred Mayer, president, Del Rio, Texas, wants two dynamos and switchboard.

Elevator.—Bailey Hotel Co., El Paso, Texas, wants electric passenger elevator, alternating, 194 volts.

Elevators.—Orrell & Carroll, Wilmington, N. C., will need hand-power elevator for vehicles.

Excavator Equipment.—Willis Shaw, 614 New York Life Building, Chicago, Ill., wants traveling steam derrick excavator fitted with one and one-half clam-shell bucket suitable for unloading sand from boats onto dock.

Farm Supplies.—Virgie Moose, Dahlonga, Ga., wants barbed wire and machinery for truck farm.

Glass Plant.—Tyler Window Glass Co., Jasper Haight, manager, Sistersville, W. Va., will need gas engine, furnaces, brick, etc., for 12-pot glass plant.

Heating and Ventilating Plant.—Bids will be opened December 15 for new boiler and heating apparatus for heating and ventilating plant of State Capitol at Columbia, S. C.; plans and specifications to accompany each bid. For information address Secretary of State M. R. Cooper.

Hoisting Equipment.—See "Excavator Equipment."

Hoisting Equipment.—Rowan Granite Co., Granite Quarry, N. C., wants new or second-hand overhead cableway (for quarry work), ten and fifteen tons capacity, spans 500 feet, movable derrick frame at one end, complete with engines, boilers, etc.

Ice Plant.—Del Rio Ice Co., Fred Mayer, president, Del Rio, Texas, wants 10-ton ice plant.

Ice Plant.—J. M. Hunt, Georgetown, Ky., wants price on second-hand 20 to 40-ton ice plant.

Knitting Mill.—Oxford Knitting Mills, Barnesville, Ga., wants 60-horse-power engine, 80-horse-power boiler, finishing and knitting machine, etc.

Laundry.—Del Rio Steam Laundry Co., Fred Mayer, president, Del Rio, Texas, wants steam-laundry equipment.

Machine Tools.—Crescent Bed Co., New Orleans, La., wants two punch machines; second-hand preferred.

Mining Equipment.—Bonanza Iron Co., H. S. Reeside, secretary, 1405 G street N. W., Washington, D. C., will need crusher, steam boiler, etc., for iron mine.

Paving.—City of Fredericksburg, Va., will open bids October 20 for curbing and paving with brick or spalls or both on a concrete base a portion of certain streets, according to plans and specifications in office of engineer, C. E. Dickinson. For specifications apply to W. S. Embrey, chairman of committee.

Pearl-button Machinery.—Dunlap & Ware, Kingston, Tenn., want addresses of makers of machinery for manufacturing buttons, handles, etc., from pearl.

Quarrying Equipment.—See "Hoisting Equipment."

Railway Equipment.—Apex Equipment Co., 11 Broadway, New York, wants 36-inch-gauge saddle-tank locomotive, about twenty tons weight, four or six-wheel driver, in first-class condition.

Seeds.—Virgie Moose, Dahlonga, Ga., wants catalogues of seeds.

Steam-power Plant.—Brenham Cotton Mills, Brenham, Texas, will open bids October 16 for steam plant, to include cross-compound engine (Corliss) of 250 horse-power, with flywheel sufficiently large at start to admit of an additional 200 horse-power later if desired, and wheel to be grooved for one-and-three-quarters-inch rope drive; also two 250-horse-power water-tube boilers, with doors arranged for fuel oil and to admit of coal burning later if desired; also feed-water heater and two Worthington boiler-feed pumps. Make bids f. o. b. Brenham.

Steam Shovel.—Welman Bradford, Washington, La., wants steam shovel, 50-foot boom, one and three-quarter yards capacity, to excavate seven feet below track, delivered at Washington or Opelousas. Quote terms on one machine or two machines.

Steel Jail Work.—S. W. Russell, St. Stephens, S. C., wants addresses of makers of steel cages.

Sulphate of Copper.—Carlo Druck & Figli, Genoa, Italy, want to correspond with manufacturers of and dealers in sulphate of copper.

Tanks.—Advance Gin & Mill Co., Vicksburg, Miss., wants two tanks for oil.

Water-wheel.—Edwin Binney, 81 Fulton street, New York, wants modern right-hand turbine wheel of twenty-five to fifty-six inches.

Water-works.—Steelton Land Co., Clarksburg, W. Va., will want pumps, tanks, piping, etc., for water-works.

Water-works.—City of Concord, N. C., wants piping and other materials for water plant. Address "The Mayor."

Water-works.—City of Mena, Ark., will soon ask bids on construction of water-works; \$25,000 available; John H. Hamilton, secretary of commission.

Water-works Equipment.—City of Sweet Springs, Mo., will need 55 to 60-horse-power engine (simple Corliss or high-speed automatic), 70 to 75-horse-power horizontal boiler, deep-well steam pump, steam pump for main, 30 to 35-kilowatt dynamo, four, six and eight-inch cast-iron pipe, steel or round column tower 60 to 75 feet high, 40,000 to 50,000-gallon tank of cypress or steel, hydrants, fittings, electric appliances, poles, etc. Address "The Mayor."

Well-drilling Machinery.—Estill County Oil & Gas Co., Irvine, Ky., wants well-drilling machinery.

Woodworking Machinery.—C. P. Mulder, Box 232, High Point, N. C., wants addresses of makers of machines (not rotary) for cutting veneers any length up to sixteen or twenty feet.

Woodenware Machinery.—J. A. Henderson, Box 113, Blackshear, Ga., wants to correspond with manufacturers of machinery for making wood water buckets, tubs, etc.

Woodworking Machinery.—Sayre Bros., Twenty-fourth street and Virginia avenue, Newport News, Va., want medium-weight hand saw and wood-turning lathe, about 24-inch swing, without shears; lathe must be double-ender and fitted with faceplate and floor-rests.

TRADE NOTES.

Land for Development.—A tract of 100 acres of land just outside of city limits and well suited for development is offered for sale. This land is partly cleared and partly woodland. For information address P. O. Box 11, Orangeburg, S. C.

Saw-Mill for Sale.—It frequently occurs that manufacturers may find it necessary to dispose of lumber-mill machinery. Such an instance is noted in the advertisement of the Menasha Woodenware Co. of Menasha, Wis. This company offers a hand mill complete. Write for full particulars.

Foreign Business.—In one mail the Detroit Graphite Manufacturing Co., Detroit, Mich., received large orders for "Superior" graphite paint from Manila, Philippine Islands, and from San Juan, Porto Rico. Two machinists work unceasingly setting up new machinery, and the factory of the Detroit Graphite Manufacturing Co. is working to its fullest capacity and far overtime in filling orders.

Mineral Lands for Sale.—A tract of 15,000 acres of coal and timber land, two miles from the railroad, the entire tract underlaid with a four-and-one-half-foot seam of coking coal, is for sale in Tennessee. It is estimated that the pine, poplar, chestnut and oak timber on this land averages 5000 feet per acre. The selling price is \$7 an acre. Address Tennessee, care of Manufacturers' Record.

Eastern Office.—Notice has been received from the National Acme Manufacturing Co., Cleveland, Ohio, of the opening of its Eastern office at 510 Arch street, Philadelphia, in charge of L. M. Waite, manager. This firm is the manufacturer of the Acme automatic multiple-spindle screw machine and the Acme screw splitter, with which cap screws, set screws, special screws and parts may be milled from rods or bars.

The Richmond Engineering Co.—The equipment of electric railways and underground construction for cities is an especial feature of the new branches of work which the Richmond Engineering Co., recently incorporated with a capital stock of \$25,000, and with headquarters at 12 South Ninth street, Richmond, Va., is taking up. This firm expresses a desire to open up correspondence with manufacturers of water works machinery and kindred lines. The Richmond Engineering Co. is at present working on contracts for the city of Richmond for an electric-light and power plant.

Flooring Plant.—The Thomas Forman Co., Ltd., Detroit, Mich., a very successful manufacturer of maple and oak flooring and other specialties, has just completed a fine new plant, modern in every particular and said to be one of the finest establishments of its kind in the United States. This plant has much new and improved machinery and greatly improved shipping facilities over the old, which was destroyed by fire about a year ago. A largely-increased demand for the product of this firm has been experienced of late from the South. Formerly an extensive business was done throughout that section with millmen, but it is now of a more general and extensive character, demanding the very finest of this product.

Crocker-Wheeler Convention.—The Crocker-Wheeler Company held at its works at Amherst, N. J., on September 25 and 26 its annual managers' convention. Those present at the annual banquet, held at the Engineers' Club, were the officers of the company, Schuyler S. Wheeler, Gano S. Dunn, W. L. Brownell, Putnam A. Bates, C. N. Wheeler and F. V. Henshaw, and branch managers Samuel Russell, Jr., Julian Roe, J. Hally Craig, Louis P. Hall, W. H. Wissing, Francis B. DeGress, Henry J. Sage, William A. Doble and Harold Lomas. During the evening Francis B. DeGress of the New York office, he having been in the service of the company longer than any of the other managers, presented to the general sales manager, Putnam A. Bates, in the name of the managers, a token of their esteem and an acknowledgement of his efforts in their behalf, which Mr. Bates responded to in his usual happy manner. The purpose of the convention is to bring all of the men closer together and give them an opportunity of comparing notes and planning methods for handling the largely-increased business of the company.

Messrs. P. T. Gartwright of Mountain Lake Park, G. A. Pritchard, Isaac Shroot, J. E. Shroot and A. D. Naylar of Oakland, Md., are about to charter a coal-mine company. They have purchased for development a 200-acre tract of land lying within a mile and a-half of Oakland. This

land is known to be underlaid within a vein of excellent coal which was worked in former years. It is claimed the vein is four feet thick and well adapted for domestic use.

To Meet at Memphis.

Mr. C. B. Carter of Nashville, secretary-treasurer of the Southern Supply and Machinery Dealers' Association, has announced a complete program for the meeting of the association at Memphis October 21, 22 and 23. The early part of the proceedings will include the usual addresses of welcome and response, reports of the secretary-treasurer and of the transportation, grievance, manufacturers' and executive committee. There will be joint sessions of dealers, manufacturers and their representatives, and among the questions to be considered are reciprocity, the most economical distribution of products by manufacturers, the advantages and disadvantages of quantity prices on consumption, practical measures for making business more profitable, free delivery, and the importance of local associations. Entertainments have been arranged for the visitors, who will number probably 100, in the shape of a theater party, a visit to the trotting park and a banquet at the Hotel Gayoso. The officers of the association are as follows:

President, C. B. Jenkins, the Cameron & Barkley Company, Charleston, S. C.

First vice-president, Levin Joynes, Southern Railway Supply Co., Richmond, Virginia.

Second vice-president, George R. Lombard, Lombard Iron Works & Supply Co., Augusta, Ga.

Secretary-treasurer, C. B. Carter, Knoxville, Tenn.

Executive committee—A. Morris Carey, Carey Machinery & Supply Co., Baltimore, Md.; J. A. Riechman, the Riechman-Crosby Company, Memphis, Tenn.; S. Milnor Price, the Henry Walke Company, Norfolk, Va.; John G. Christopher of John G. Christopher Company, Jacksonville, Fla.

For a Cement Plant.

V. Cascino of Mexico City, Mexico, writes to the Manufacturers' Record that he desires to secure American capital in establishing a Mexican cement plant. He states that if one-fifth of the necessary capital would be furnished by American investors, the enterprise would be pushed to completion.

T. A. Wright of Rockwood, Tenn., and associates have taken charge of the coal mines at Helenwood, Tenn., and expect to develop them on a large scale. The mines were formerly operated, but have been idle for five years. Operations will be conducted under the title Scott County Coal Co., with principal office at Rockwood, Tenn.

Bids for the improvement of Savannah harbor, for which about \$1,200,000 will be spent during the next two years, will be opened on October 23 at the office of United States engineer at Savannah.

The sales in the Joplin (Mo.) district during the week ended September 27 were 10,108,280 pounds of zinc ore and 1,217,550 pounds of lead ore, valued in all at \$178,871.

A convention to further the movement for a forest reserve in the Southern Appalachians will be held at Asheville, N. C., on October 25.

Citizens of Norfolk are considering plans to utilize blocks of peat from the Great Dismal Swamp during the coal famine.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., October 1.

The central point of interest in the Baltimore stock market during the past week was Atlantic Coast Line shares, attention being fixed upon them by the deal for the control of the Louisville & Nashville Railroad. The result of this was that the stock advanced about eight points; then there came a reaction, and finally another rise, attaining the high level before reached. Dear money caused depression in nearly everything of a speculative nature, and retarded trading. United Railways scored a fractional advance, but reacted, and the bonds also declined. Consolidated Gas likewise receded, and the Seaboard Air Line, after rising about two points, reacted fractionally below the opening price, while the preferred stock made a similar advance and declined, after which came a fractional recovery. The 4 per cent. bonds also declined. There was some temporary improvement in Cotton Duck incomes, but the tone of G.-B.-S. Brewing issues was weak. The trust-company stocks were rather quiet, but steady, and bank stocks were also well sustained, while investment securities generally were firm.

In the trading United common started at 14½, rose to 14¾ and reacted to 13¾, recovering to 14; the incomes opened at 68½, declined to 67½, rose to 68½ and dropped to 67, while the 4s were steady between 94½ and 95. United Electric Light & Power preferred sold at 38 and 38½; Consolidated Gas was traded in between 72½ and 74. Seaboard common started at 30½, advanced to 32¼ and reacted to 29½, finally remaining about steady between 30 and 30½. The preferred opened at 50½, advanced to 51 and declined to 48, from which point there was a recovery to 49½. Seaboard 4s, after starting at 87½, went ½ higher, and then declined gradually to 87, while the 5 per cents sold between 103¼ and 104¼. Cotton Duck common was traded in at 8½ and 8¾, the income bonds at 42 to 43½ and the 5s at 78¼. G.-B.-S. common changed hands between 13 and 14, the incomes between 37½ and 38, and the 1sts at 50.

Central Trust sold at 60, Union between 72 and 73, International at 148, Mercantile at 170, United States Fidelity at 149½ to 150, and Maryland Casualty at 54½. Merchants' National Bank sold at 195, Western at 38, Third National at 134, and Union at 119 and 119½.

Atlantic Coast Line started at 174, rose quickly to 182, and after reaching 183 gradually dropped to 170, from which point there was a reaction to 181½, settling finally to 180. Atlantic Coast Line 4s (S. C.) sold at 103¼.

Other securities traded in were as follows: Georgia & Alabama Consol 5s, 111½ to 112¼; Potomac Valley 5s, 117½; Anacostia & Potomac 5s, 100 to 102; Knoxville Traction 5s, 102½; Baltimore City Passenger 5s, 109; City & Suburban (Baltimore) 5s, 115; Georgia Southern & Florida 1st preferred, 101; Northern Central stock, 124; Northern Central 5s (A), 124; Alabama Consolidated Coal & Iron, 36 and 37; preferred, 87½ and 89½; Atlantic Transport, 270 and 272; Baltimore Brick, 9; Baltimore City 5s, W. L. 1916, 123; Baltimore City 3½s, 1928, 109½; Baltimore City 3½s, 1930, 110½; Raleigh & Augusta 6s, 125½; Consolidation Coal,

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86; Nashville Railway common, 6 and 6½;	
Nashville Railway 5s, certificates, 75;	
Wilmington & Weldon 5s, 122½; Georgia,	
Carolina & Northern 5s, 112¼ and 112½;	
National Compositite, 40; North Carolina 4s, 104 and 104½; Virginia Midland 1sts, 105¼; do. 2ds, 113¼; do. 4ths, 111;	
do. 5ths, 114¼; South Bound 5s, 111;	
Norfolk & Carolina 1sts, 118½; Newport News & Old Point 5s, 109½; Toledo, St. Louis & Western 5s, 81.	
The St. Louis Southwestern Railroad reports for August gross earnings \$529,502, decrease \$31,559; expenses \$428,308, decrease \$68,540; net earnings \$101,194, increase \$36,981. Net earnings for two months \$221,916, increase \$71,737. Betterments, including in operating expenses August, 1901, \$53,318; August, 1902, nothing. There was expended for betterments and charged to general improvement fund August, 1902, \$78,829.	
The Louisville, Henderson & St. Louis Railroad reports for July gross earnings \$68,815, increase \$11,420; expenses \$44,059, increase \$5,496; net earnings \$24,756, increase \$5924.	
The Columbia, Newberry & Laurens Railroad reports for July gross earnings \$13,614, increase \$2771; expenses \$10,274, increase \$4536; net earnings \$3340, decrease \$1765.	
SECURITIES AT BALTIMORE.	
Last Quotations for the Week Ended October 1, 1902.	
Railroad Stocks. Par. Bid. Asked	
Georgia Sou. & Fla. 1st Pref.....100 101 102	
United Railways & Elec. Co..... 50 13¾ 14	
Seaboard Railway Common.....100 30 30½	
Seaboard Railway Preferred.....100 49½ 50	
Atlantic Coast Line of Conn.....100 360¼ 400	
[For Additional Financial News, See Pages 38 and 39.]	

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